What You Need to Know About the Latest Research on Adolescents!

Win Turner, Ph.D. LADC
American Institutes for Research
SAMHSA

Spring Training Institute: From Research to Practice

Thank You !

- CSAT - Randy Muck,
- CMHS
- ORC Macro
- Chestnut Health Systems – Mike Dennis
- Researchers - Kimberly Hoagwood, Bruce Chorpita, Paula Riggs, Barbara Burns, Robert Drake
- ADAP Staff & Michael McAdoo & Vermont Communities

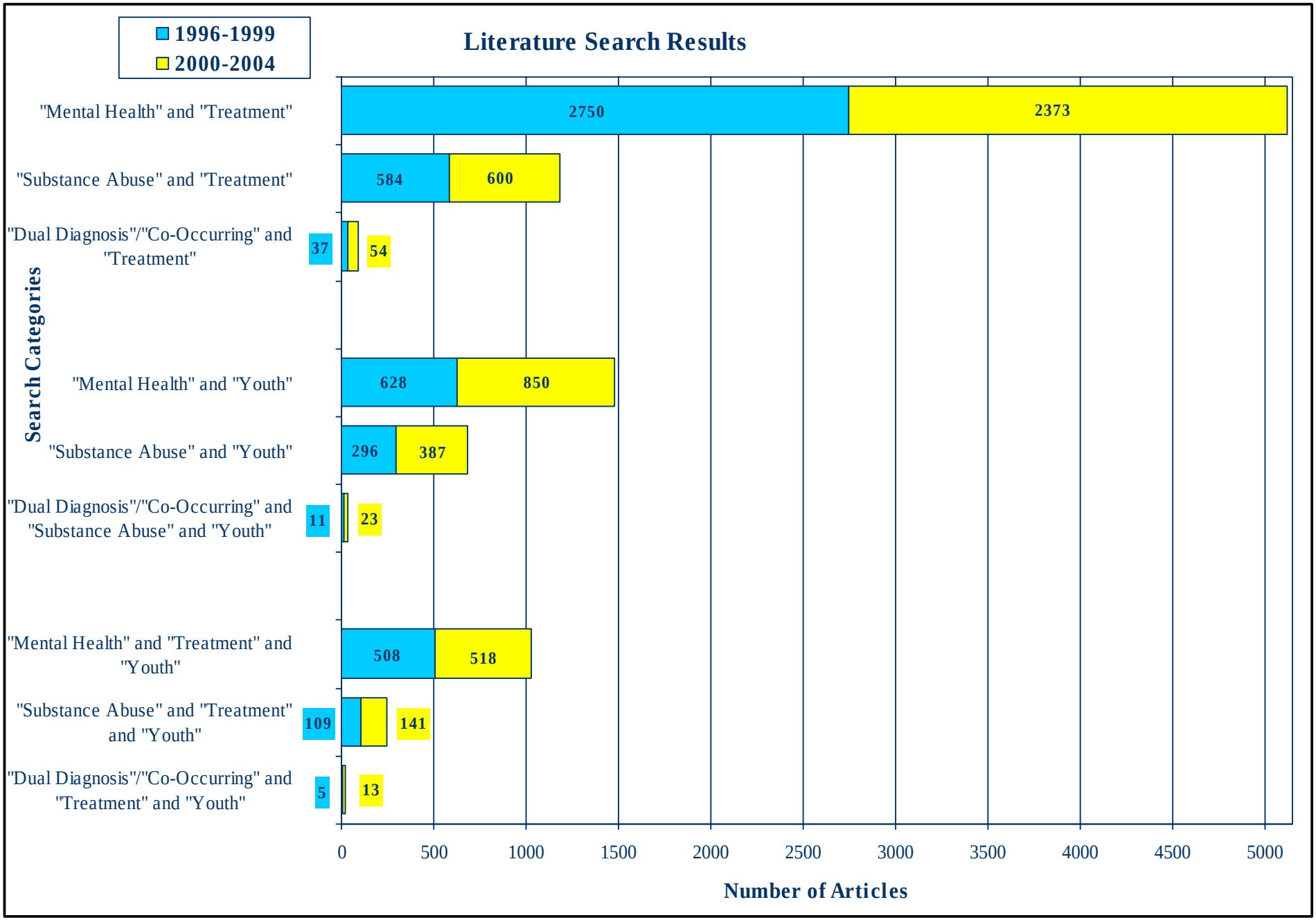
Presentation Agenda

- Epidemiology – CSAT & CMHS Data Set
- Describe - Who? What? Where?
- Directionality - When?
- Define and Grade the Knowledge Base
- Illustrate the Knowledge Base

Co- occurring Youth

Past Problems with National Data System – Dual diagnosis is Under Reported

- Identification
- Funding
- Early Discharge Without Thorough Assessment
- New Field with a Lot of Resources to Help Guide Direction of Exploration.


1996-1999
2000-2004
Literature Search Results
"Mental Health" and "Treatment"
2750
2373
"Substance Abuse" and "Treatment"
584
600
"Dual Diagnosis"/"Co-Occurring" and "Treatment"
37
54
"Mental Health" and "Youth"
628
850
"Substance Abuse" and "Youth"
296
387
"Dual Diagnosis"/"Co-Occurring" and "Substance Abuse" and "Youth"
11
23
"Mental Health" and "Treatment" and "Youth"
508
518
"Substance Abuse" and "Treatment" and "Youth"
109
141
"Dual Diagnosis"/"Co-Occurring" and "Treatment" and "Youth"
5
13
Search Categories
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
Number of Articles

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration
Center for Mental Health Services
www.samhsa.gov

CMHS National Evaluation

Aggregate Data Profile Report

Grant Communities Funded from 1997 to 2000
(approximately 50 sites)

Prepared by the National Evaluation Team at ORC MACRO℠

December 2003

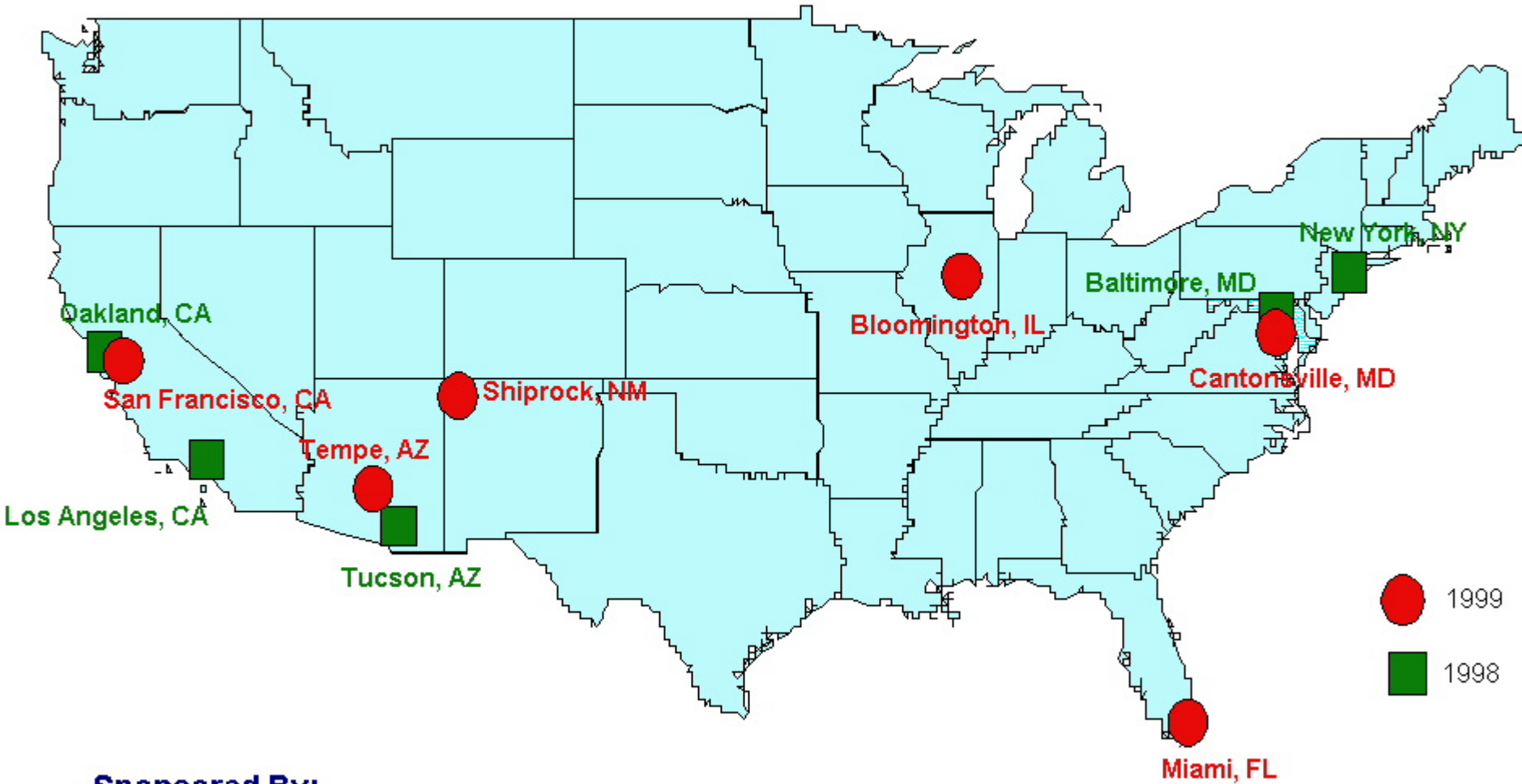
Demographic Characteristics and Custody Status of Children Served

	Overall Sample
Gender	(*n* = 16,336)
Male	66.2%
Female	33.8%
Average Age	(*n* = 16,244) 11.4 years
Categorical Age	(*n* = 16,165)
Birth to 3 years	6.7%
4 to 6 years	11.4%
7 to 11 years	23.6%
12 to 14 years	29.5%
15 to 18 years	27.8%
19 to 21 years	1.0%
Race*	(*n* = 12,699)
American Indian or Alaska Native	9.8%
Asian	0.9%
Black or African American	24.3%
Native Hawaiian or Other Pacific Islander	0.5%
White	61.3%
Of Hispanic Origin	8.3%
Multi-racial	6.5%
Other	1.4%
Custody Status of Child**	(*n* = 13,104)
Two Biological Parents, or One Biological and One Stepparent	25.2%
Biological Mother Only	43.8%
Biological Father Only	4.3%
Adoptive Parent(s)	4.1%
Foster Parent(s)	1.0%
Grandparent(s)	6.4%
Ward of the State	9.1%
Other***	6.2%

* Because individuals may claim more than one racial background, the race variable may add to more than 100%.
** Custody status refers to legal status and may not reflect living arrangement. For information on living arrangement see slide entitled “Living Arrangements at Intake.”
*** Other includes siblings, aunts and/or uncles, adult friend, and other caregivers.

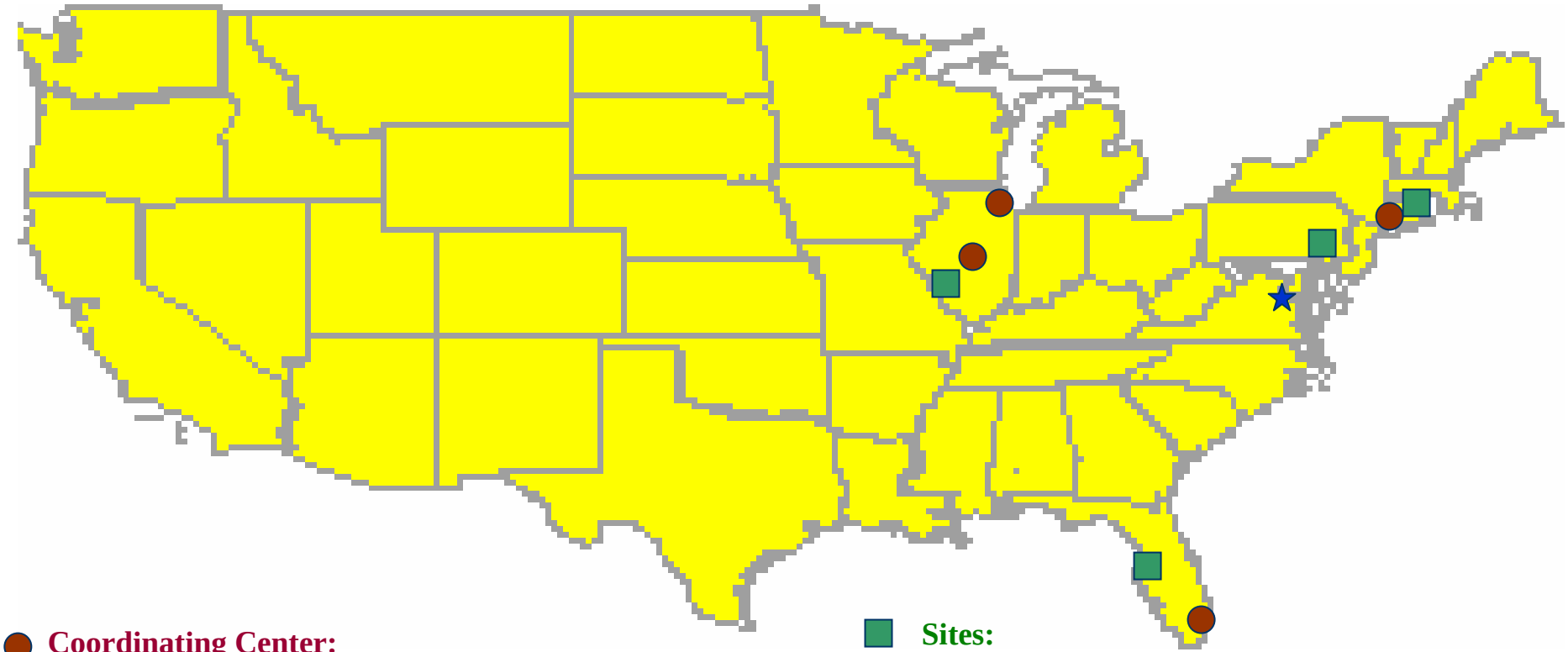
ATM

Adolecent Treatment Models: A Study of Existing Adolescent Treament Models



Sponsored By:
Center for Substance Abuse Treatment (CSAT),
Substance Abuse and Mental Health Services Administration (SAMHSA),
U.S. Department of Health and Human Services (DHHS)

CYT Cannabis Youth Treatment Experiment: A Collaborative Study of the Effectiveness of Treatment for Cannabis Use Disorders



● **Coordinating Center:**
Chestnut Health Systems, Bloomington, IL, and Chicago, IL
University of Miami, Miami, FL
University of Connecticut Health Center, Farmington, CT

■ **Sites:**
Univ. Conn. Health Center, Farmington, CT
Operation PAR, St. Petersburg, FL
Chestnut Health Systems, Madison County, IL
Children's Hospital of Phil., Philadelphia, PA

★ **Sponsored by: Center for Substance Abuse Treatment (CSAT), Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services**

CYT

Cannabis Youth Treatment Experiment

Treatment Series

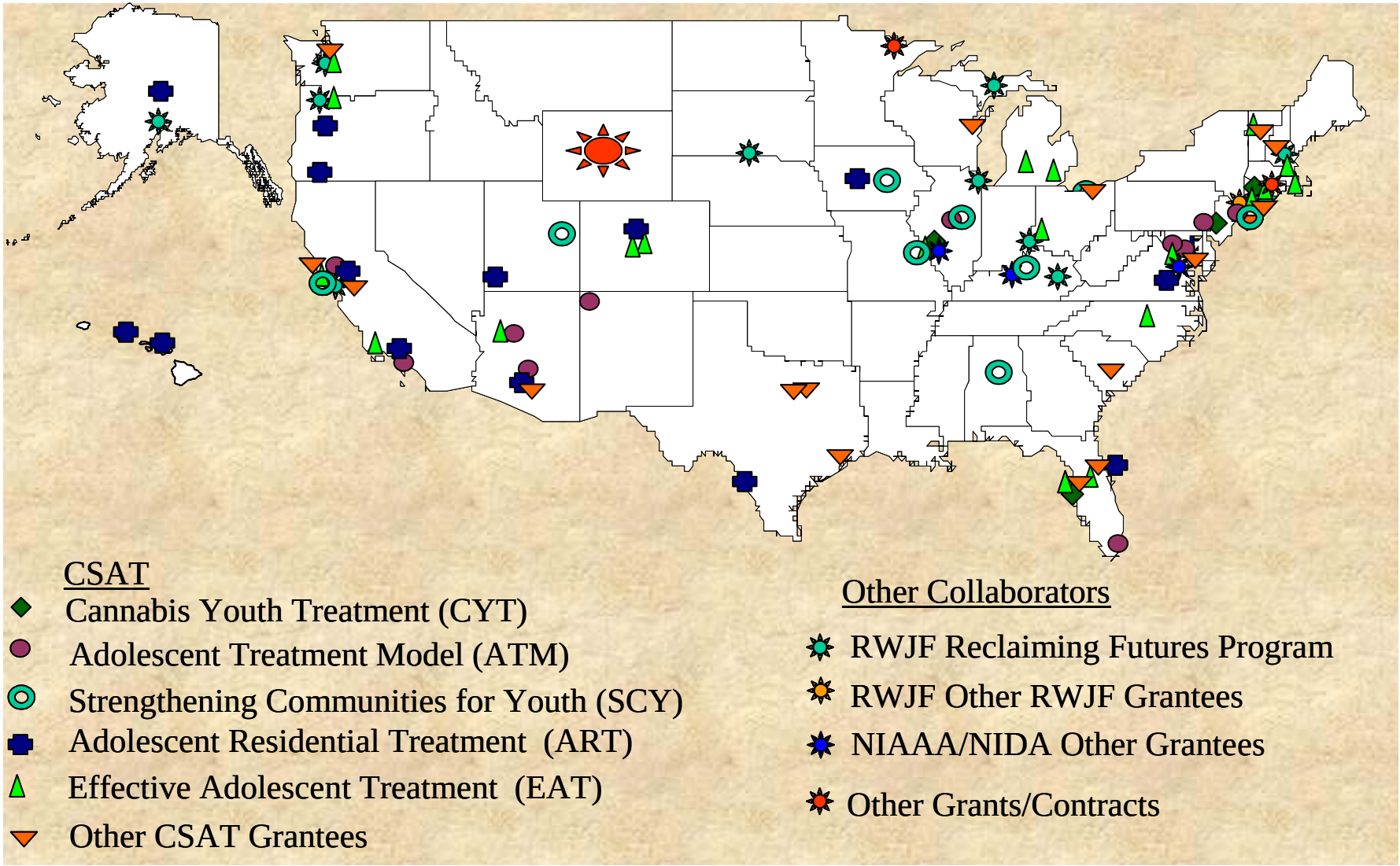
1. **Motivational Enhancement Therapy/Cognitive Behavior Therapy (MET/CBT5)**
2. **MET/CBT12 (uses Cognitive Behavior Therapy 7 [CBT7] manual)**
3. **Family Support Network (FSN) –uses MET/CBT5 and 7 manuals PLUS FSN manual**
4. **Adolescent Community Reinforcement Approach (ACRA)**
5. **Multidimensional Family Therapy (MDFT)**

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration
Center for Substance Abuse Treatment
www.samhsa.gov

Recent Adolescent Treatment Studies using the same core GAIN measure

- Drug Outcome Monitoring Study (DOMS) across levels of care and age (adolescent, young adult, adult)
- 5 CSAT Cannabis Youth Treatment (CYT) grants
- 10 CSAT Adolescent Treatment Model (ATM) grantees
- 7 Persistent Effects of Treatment Study of Adolescents (PETS-A) subcontracts to follow adolescents out to 30 months.
- 12 CSAT Strengthening Communities—Youth (SCY) grants
- 11 RWJF Reclaiming Futures (diversion) grants
- 17 CSAT Adolescent Residential Treatment (ART) grants
- 2 NIAAA Assertive Aftercare Program (AAP) experiments
- Half dozen other evaluations of adolescent treatment, substance abuse prevention programs, or central intake using subsets of items
- Also used in over a dozen adult treatment studies, including CSAT's co-occurring disorder grants and several NIAAA/NIDA grants.
- **CYT Increased Days Abstinent and Percent in Recovery (no use or problems while in community)**

Adolescent Treatment Program
GAIN Clinical Collaborators



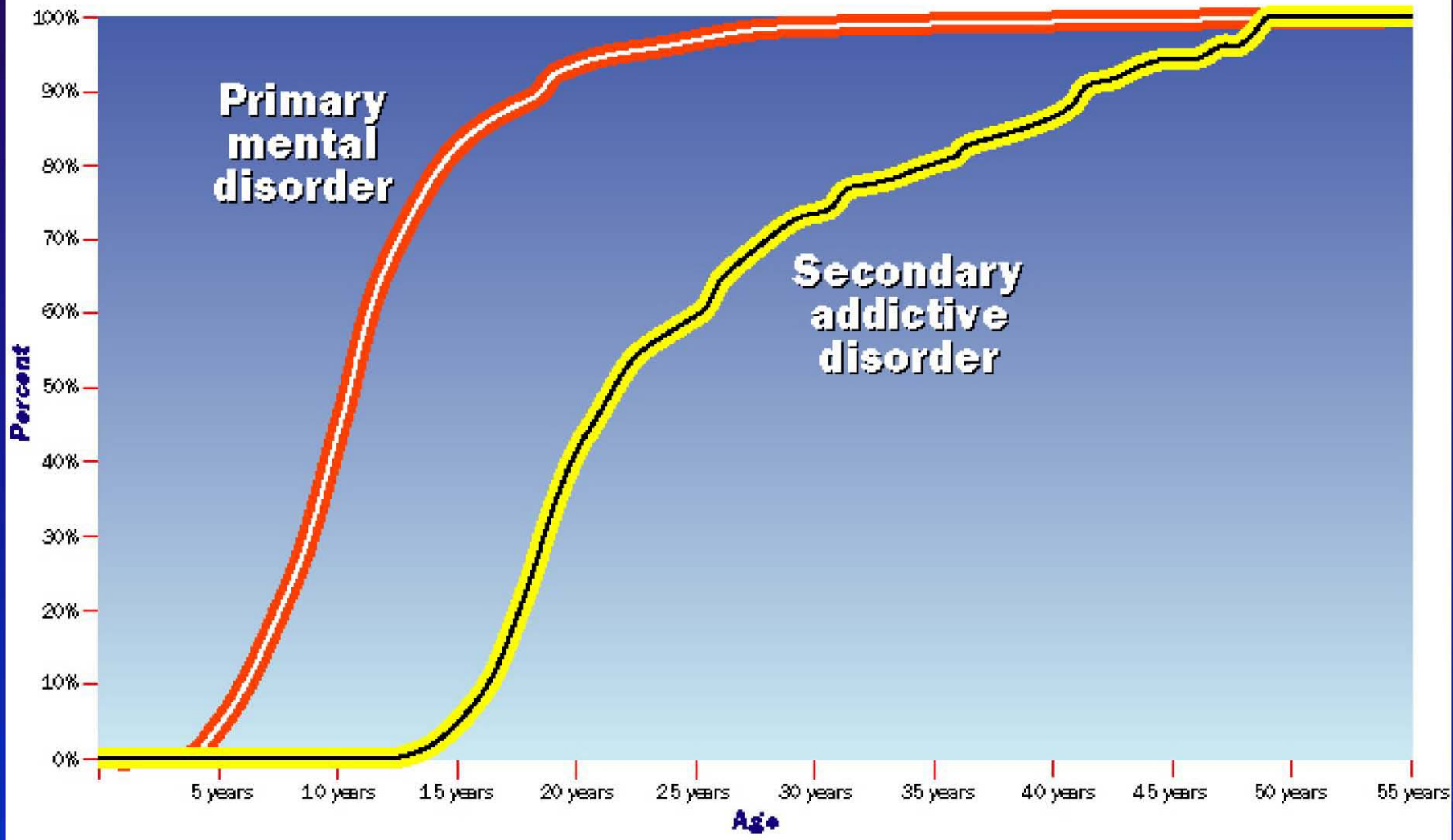
Source: www.chestnut.org/li/apss

Assessment Tools That Can Be Used by Parents and Professionals

- Child Behavior Checklist (CBCL) 2-3 & 4-18 years
- Devereux Early Childhood Assessment Program
- Infant-Toddler Social Emotional Assessment
- Vineland Social-Emotional Early Childhood Scales
- Global Assessment Scale for Children(GASC)
- Parents Evaluations of Developmental Status (PEDS)
- Substance abuse survey integrating measures from SOC & CSAT
- DSM interview for childhood disorders

Opportunity for preventing comorbid disorder

Cumulative age of onset distributions of first lifetime mental disorder and first lifetime addictive disorder in the subsample of respondents with lifetime co-concurrence of a primary mental disorder and a secondary addictive disorder



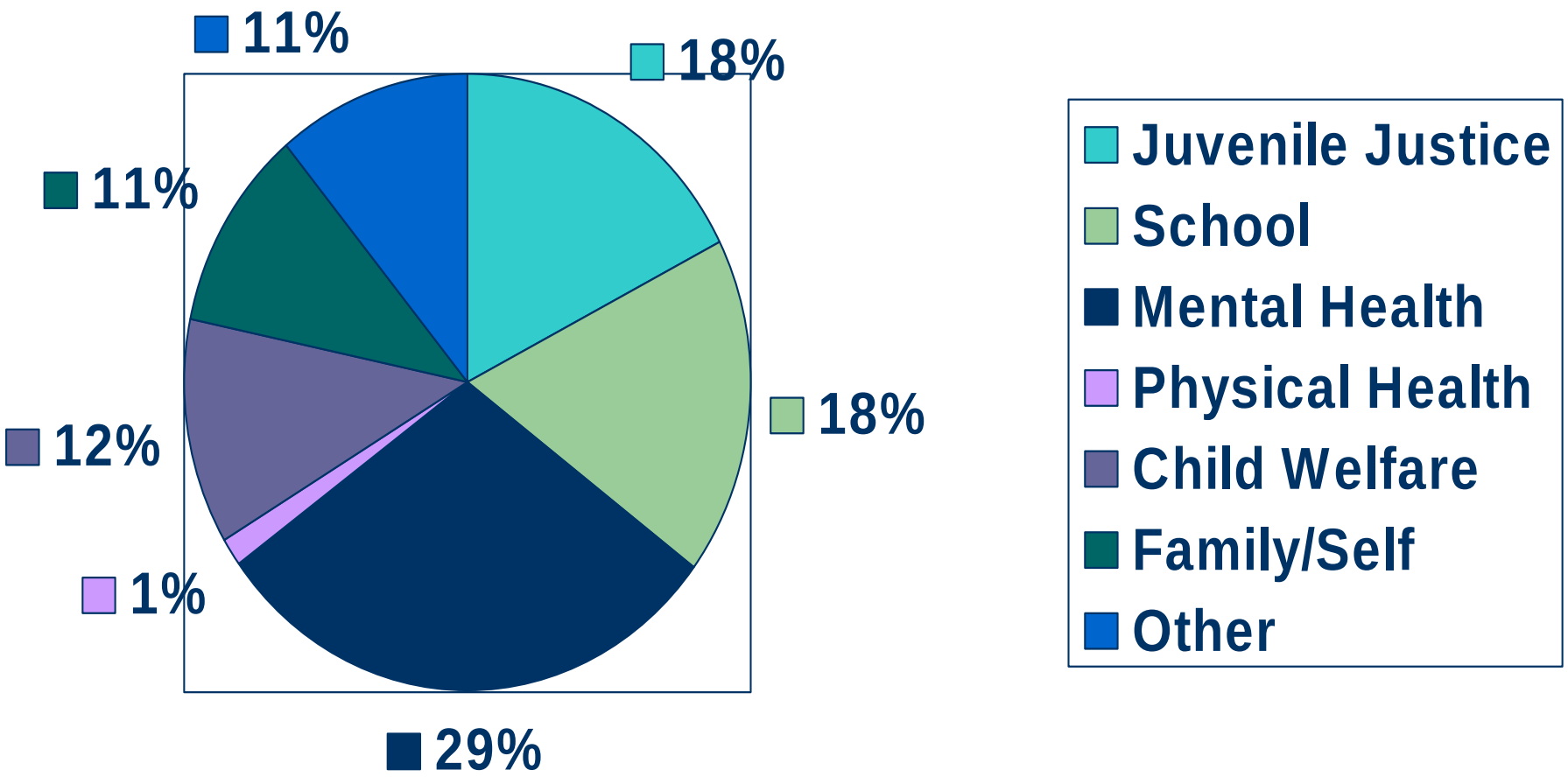
Source: Kessler, Nelson, McGonagle, et al. (in press)

Most Common Presenting Problems

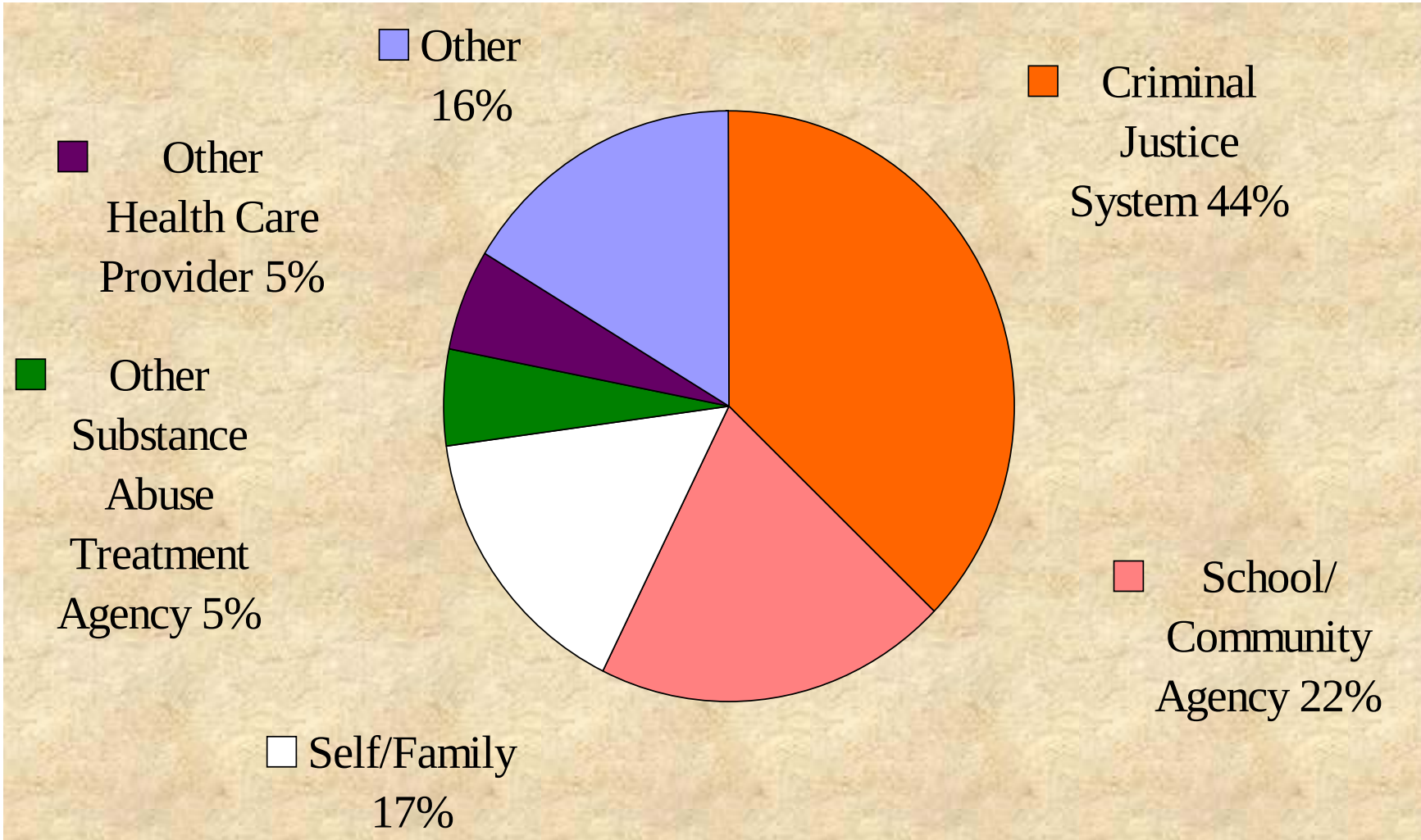
- Missed Opportunity
  - Verbal/Physical Aggressiveness
  - Academic Difficulties
  - Impulsivity
  - Hyperactivity
  - Depressed Mood
  - Poor Social Skills

Sources of Adolescent Referrals (SOC)

n = 12,094. age = 12 years old

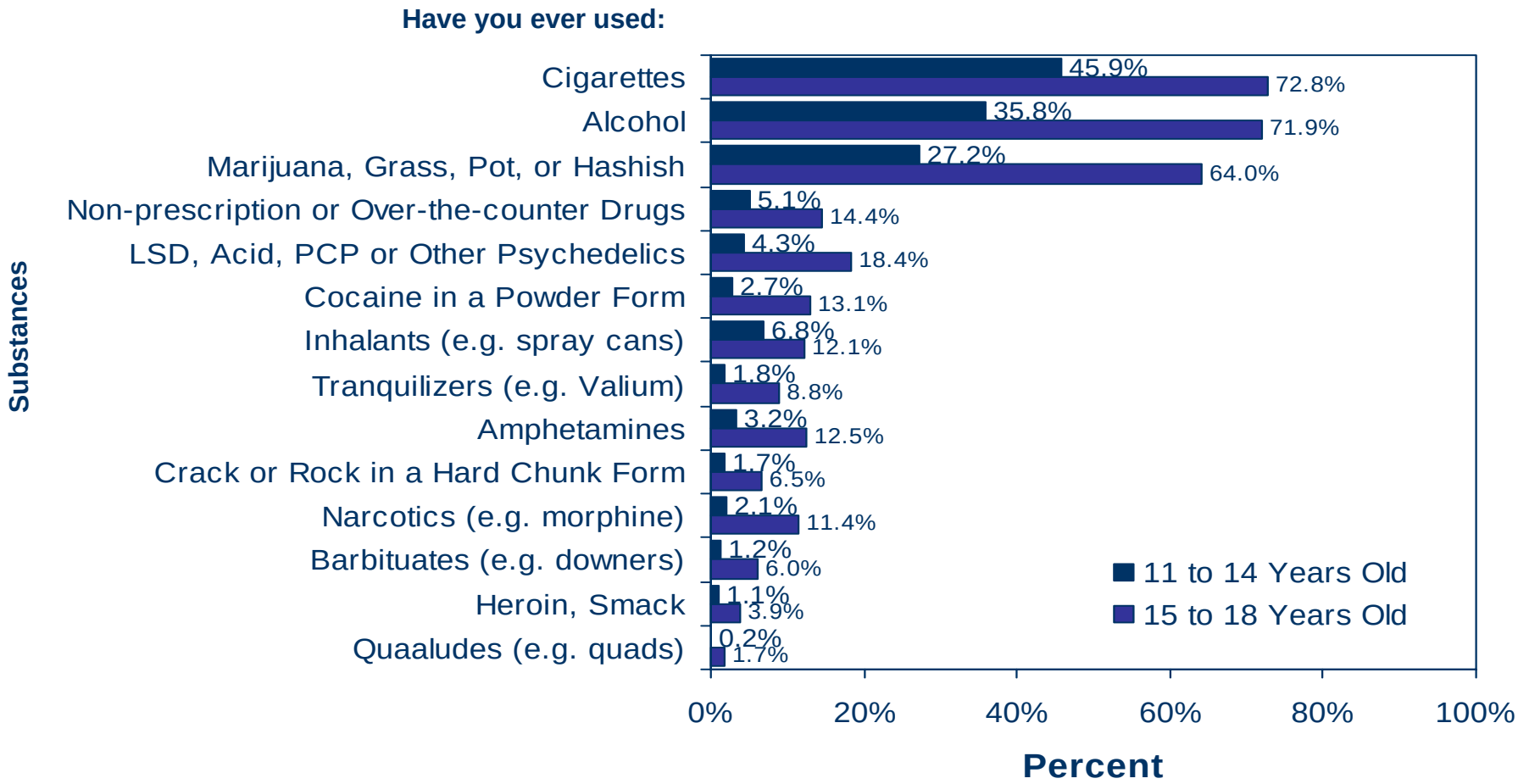


Sources of Adolescent Referrals



Source: Dennis et al., in press and OAS (2000) 1998 Treatment Episode Data Set (TEDS)

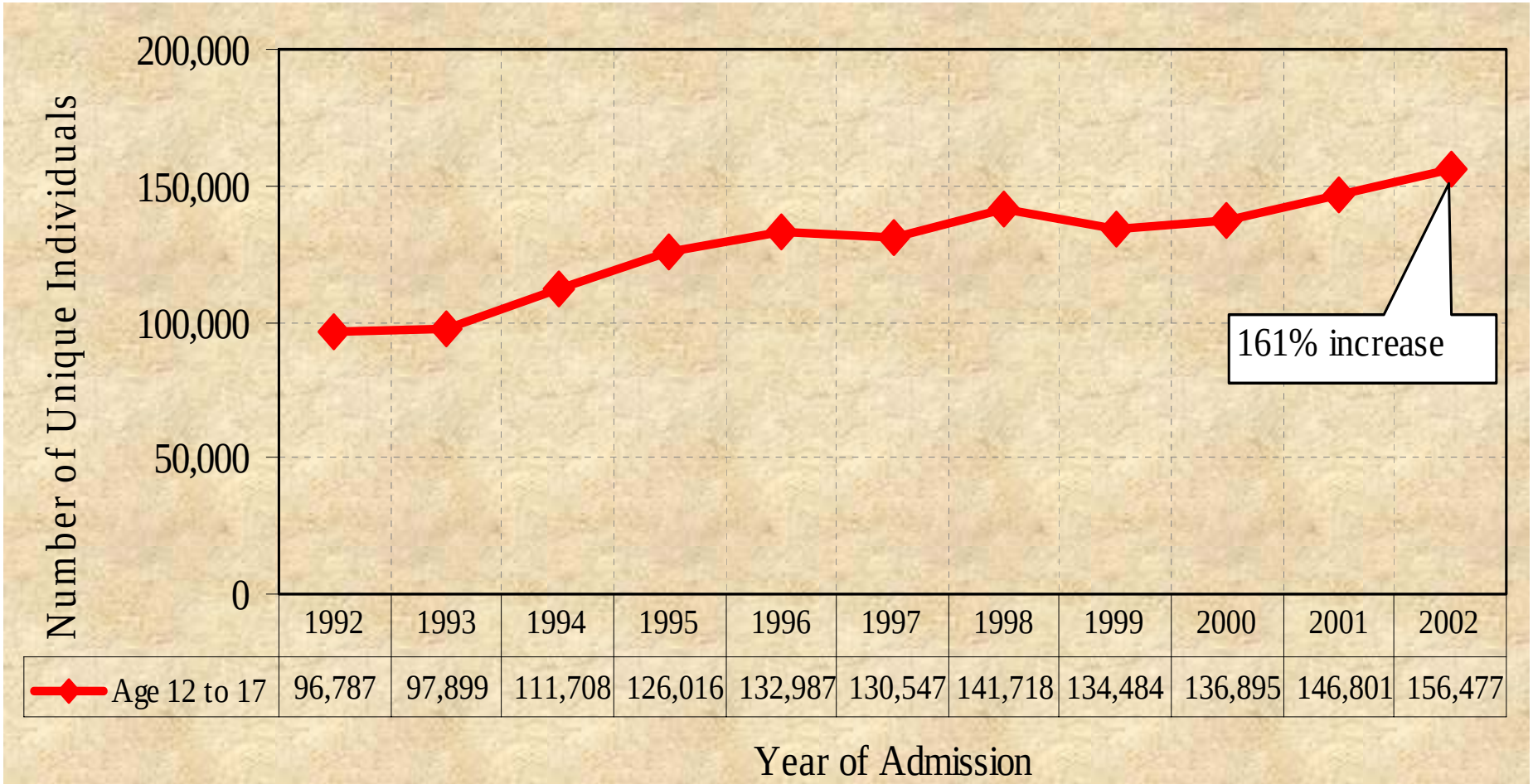
Substance Use History at Intake by Age Category*



11 to 14 Years Old: Number of children varied from 2,440 to 2,452.
15 to 18 Years Old: Number of children varied from 1,571 to 1,575.

* Substance use information was based on self reports from youth 11 years or older.

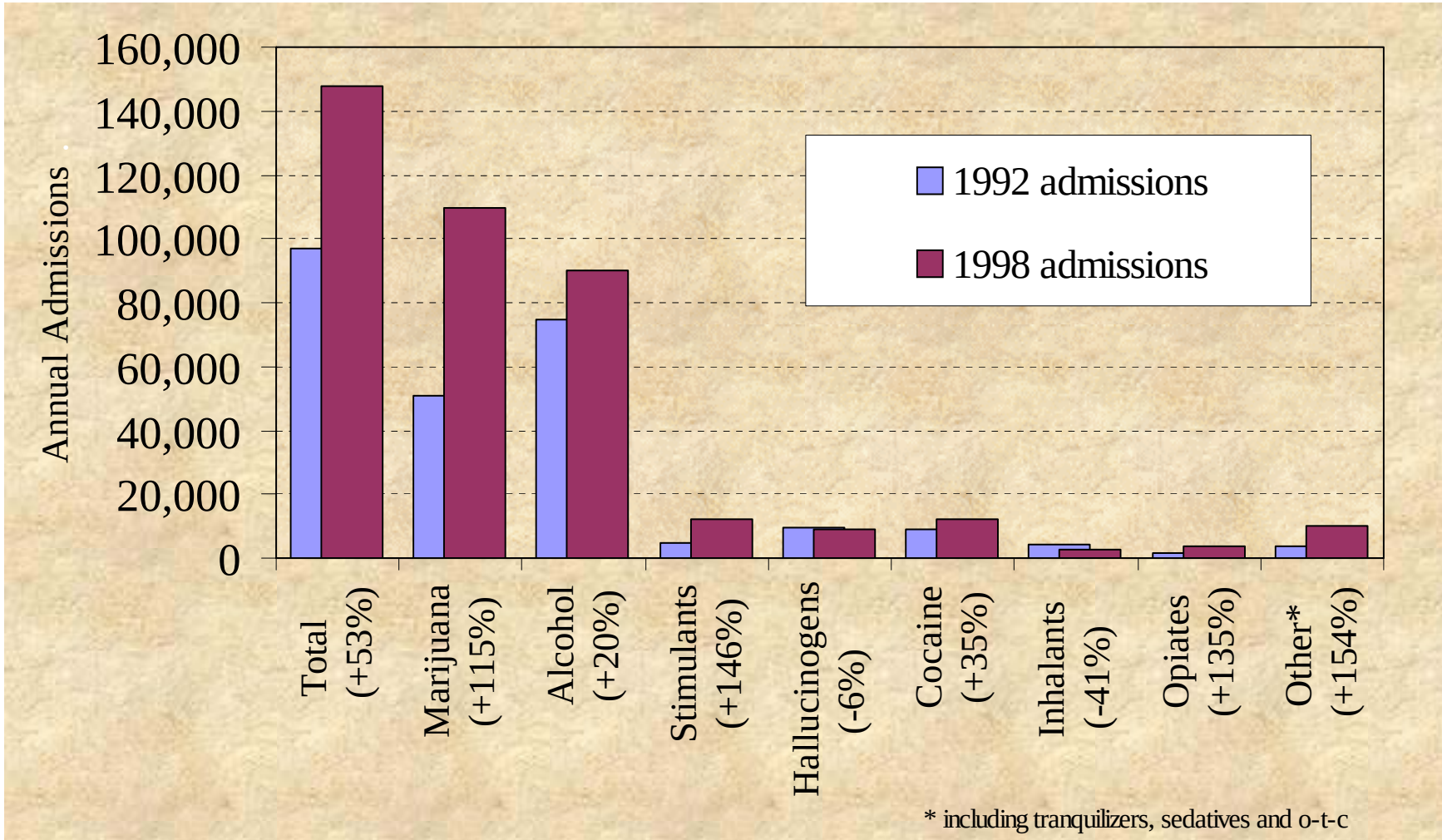
Trend in Adolescent Substance Abuse Treatment Admissions: 1992 to 2002



	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Age 12 to 17	96,787	97,899	111,708	126,016	132,987	130,547	141,718	134,484	136,895	146,801	156,477

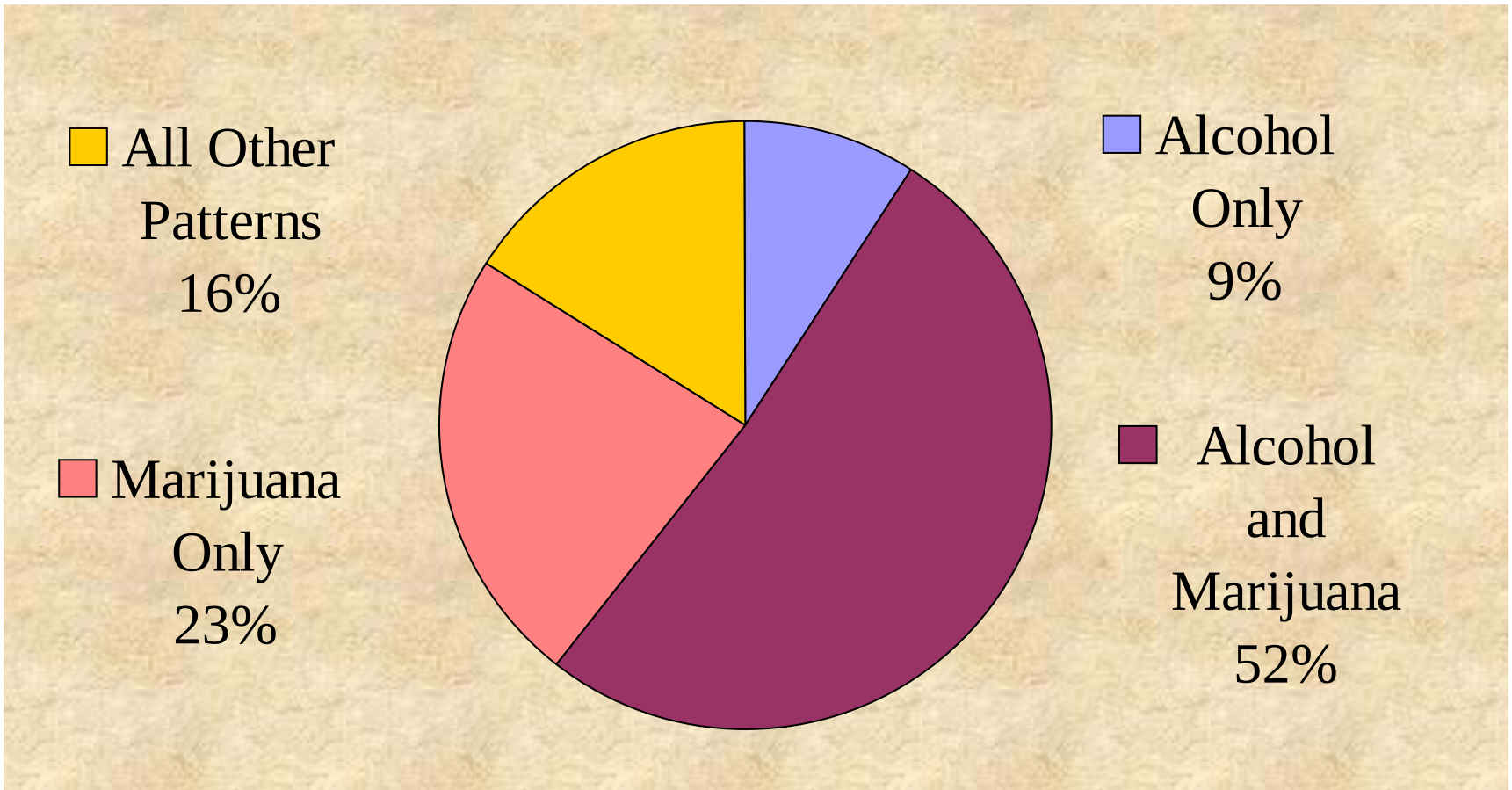
Source: Office of Applied Studies 1992- 2002 Treatment Episode Data Set (TEDS)
http://www.samhsa.gov/oas/dasis.htm

Change in Adolescent Admissions (1992-1998)



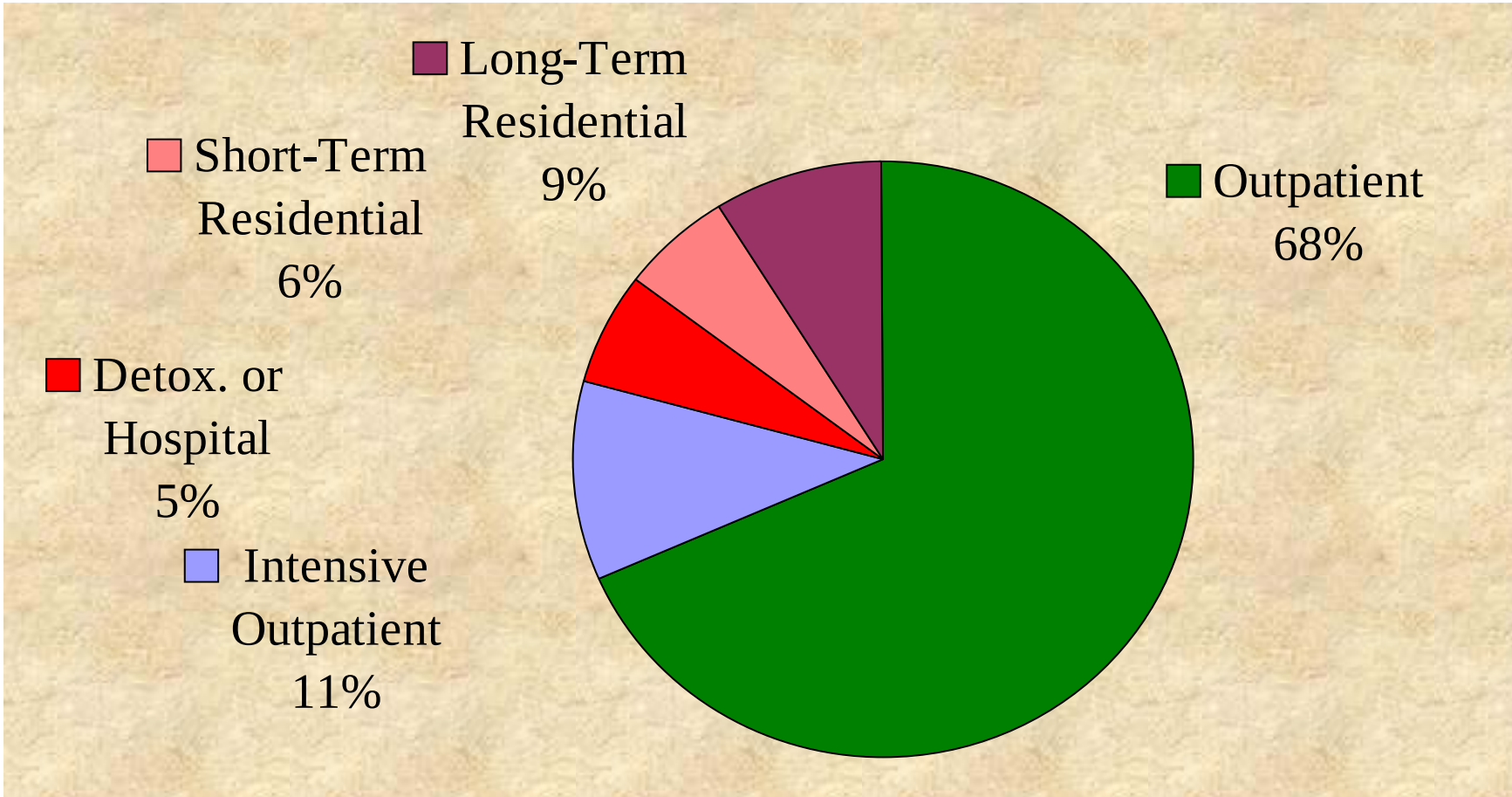
Source: Dennis, Dawud-Noursi, Muck & McDermeit, 2002 and 1992-1998 Treatment Episode Data Set (TEDS)

Patterns of Substance Use Problems



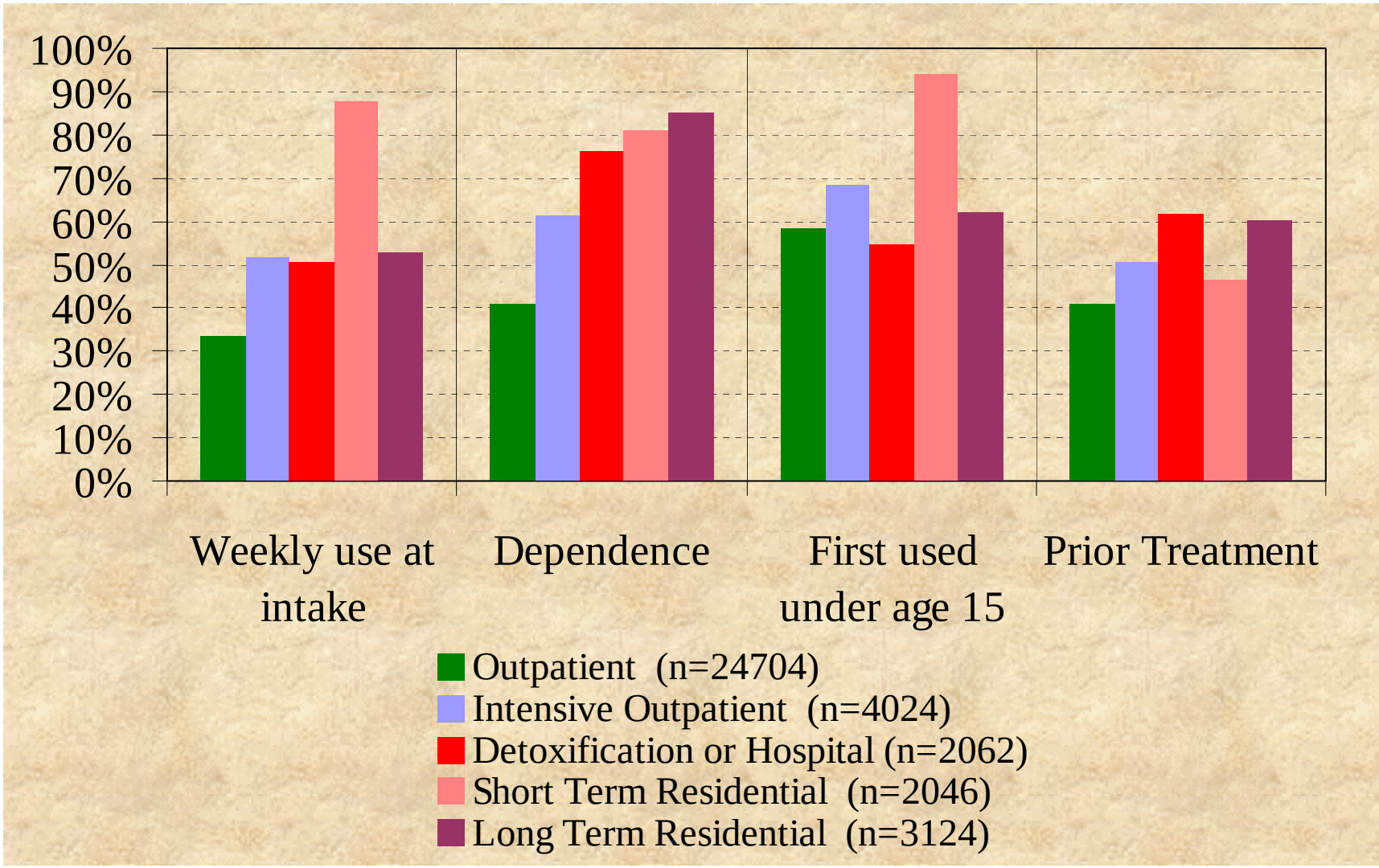
Source: Dennis, Dawud-Noursi, Muck & McDermeit, 2002 and 1998 Treatment Episode Data Set (TEDS)

Level of Care at Admission



Source: Dennis, Dawud-Noursi, Muck & McDermeit, 2002 and 1998 Treatment Episode Data Set (TEDS)

Severity Varies by Level of Care

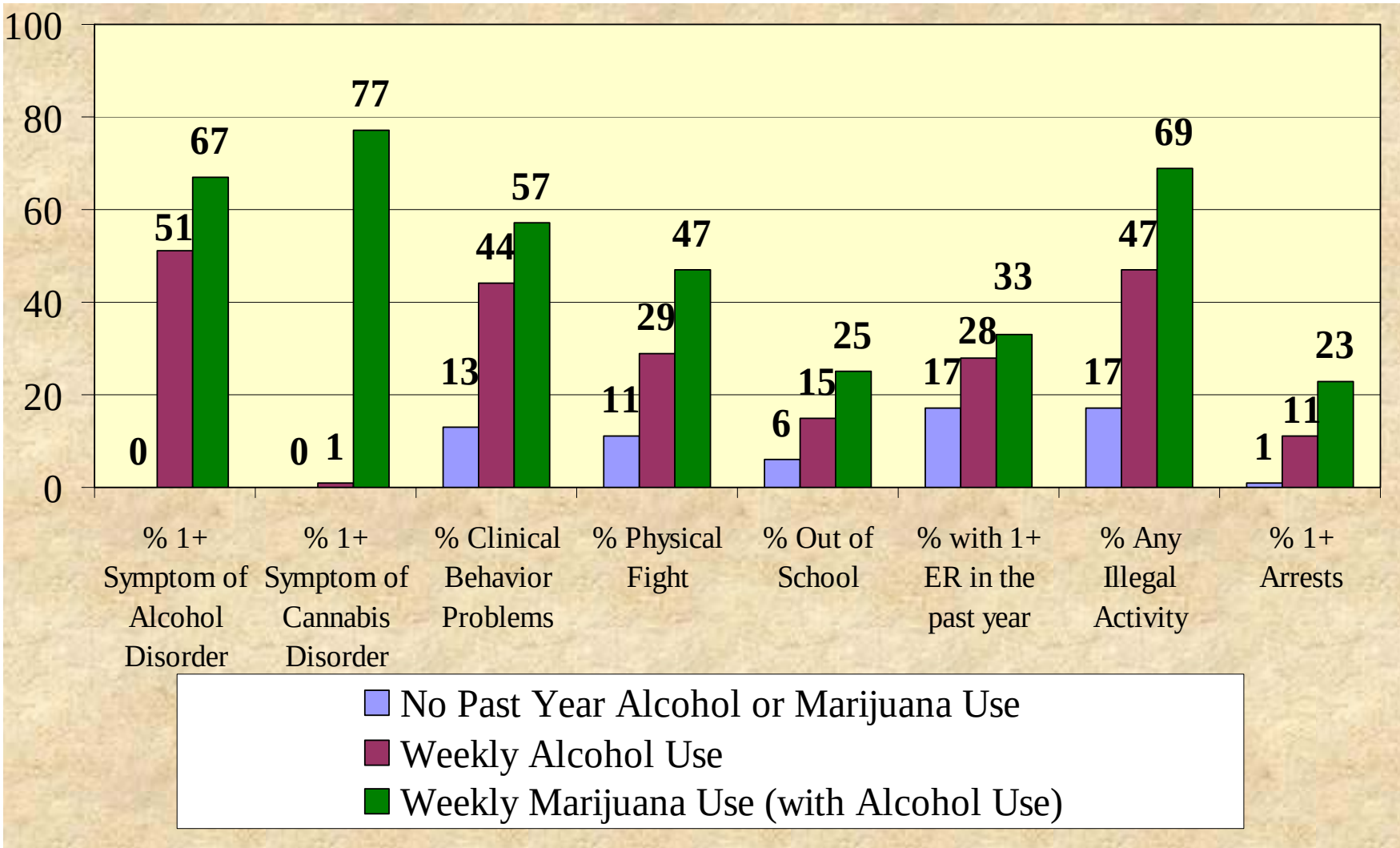


Source: Dennis, Dawud-Noursi, Muck & McDermeit, 2002 and 1998 Treatment Episode Data Set (TEDS)

Most Frequent Diagnoses in MH Settings

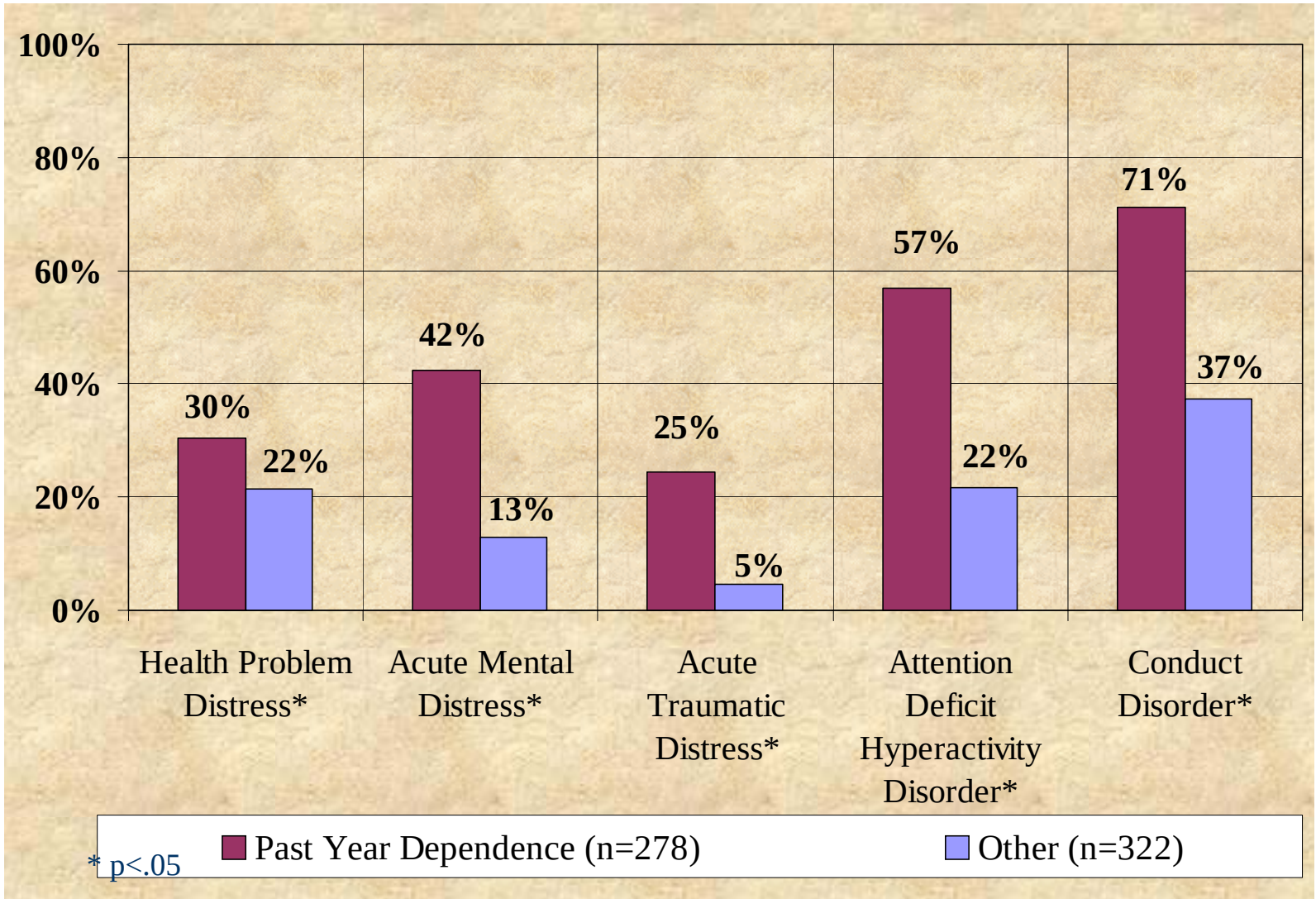
- Oppositional Defiant/Conduct Disorders
- Attention Deficit/Hyperactivity Disorder
- Depression
- Anxiety
- Traumatic Stress
- Substance Disorder

Consequences of Substance Use



Source: Dennis, M.L., Godley, S.H., & Titus, J.C. (1999, Fall).

Severity is Related to Other Problems



Source: Tims et al 2002

What we are learning: CYT & ATM

- Treatment can work, but needs improvement to be comprehensive.
- Community Outpatient Treatment Models need help.
- Few will sustain recovery on their own.
- Relapse is the norm from all levels of care.
- Assertive continued care is essential.
- Co-occurring is the norm.
- The types of adolescents that need treatment.

What we are learning: Research

- The “dose” of treatment or the “type” of treatment is less influential than we want to believe.
- Intake in 48 hours is a must (75% vs.50!)
- The most important treatment factors affecting adolescents are the co-occurring issues including trauma/victimization.
- Co-occurring = Two Types: Internalizing & Externalizing (difficult temperament)
- Victimization/Trauma = 60-80%
- Comprehensive Treatment for adolescents consists of **multiple elements** and **many treatment episodes** across **linked environments**.

Who Uses Drugs? Ages 12-18

- Early Onset = More Severe Course.
- Impaired psychological self-regulation contributes to early age onset of SUD.
- Need to tailor Treatment to type of youth.
- Mixed groups have negative impact (inc. severity).
- **Gender and Family History** (fixed) should not distract from psychopathology and environment
- **Friends** affect use and relapse

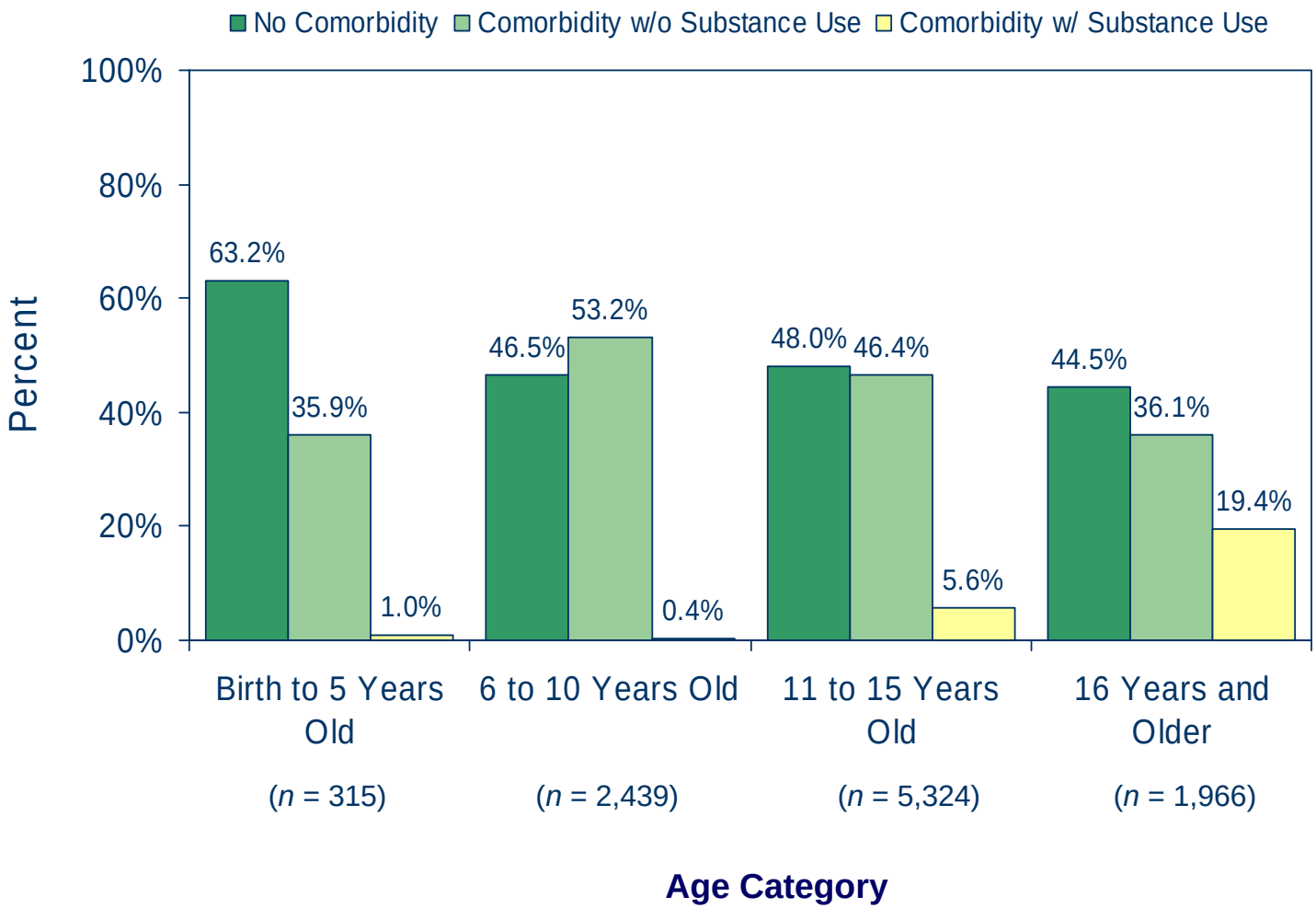
Prevalence & Chronicity

- Co-occurring mental disorders are common and serious, (prevalence rates 20% - 80% depending on sample pool.
- Research indicates the onset of the mental disorder often precedes the addictive disorder. (Temporal order)
- The likelihood of adolescent substance use and dependence is strongly associated with both
  - younger age of onset
  - severity of emotional and behavioral problems
  - True across gender and race.

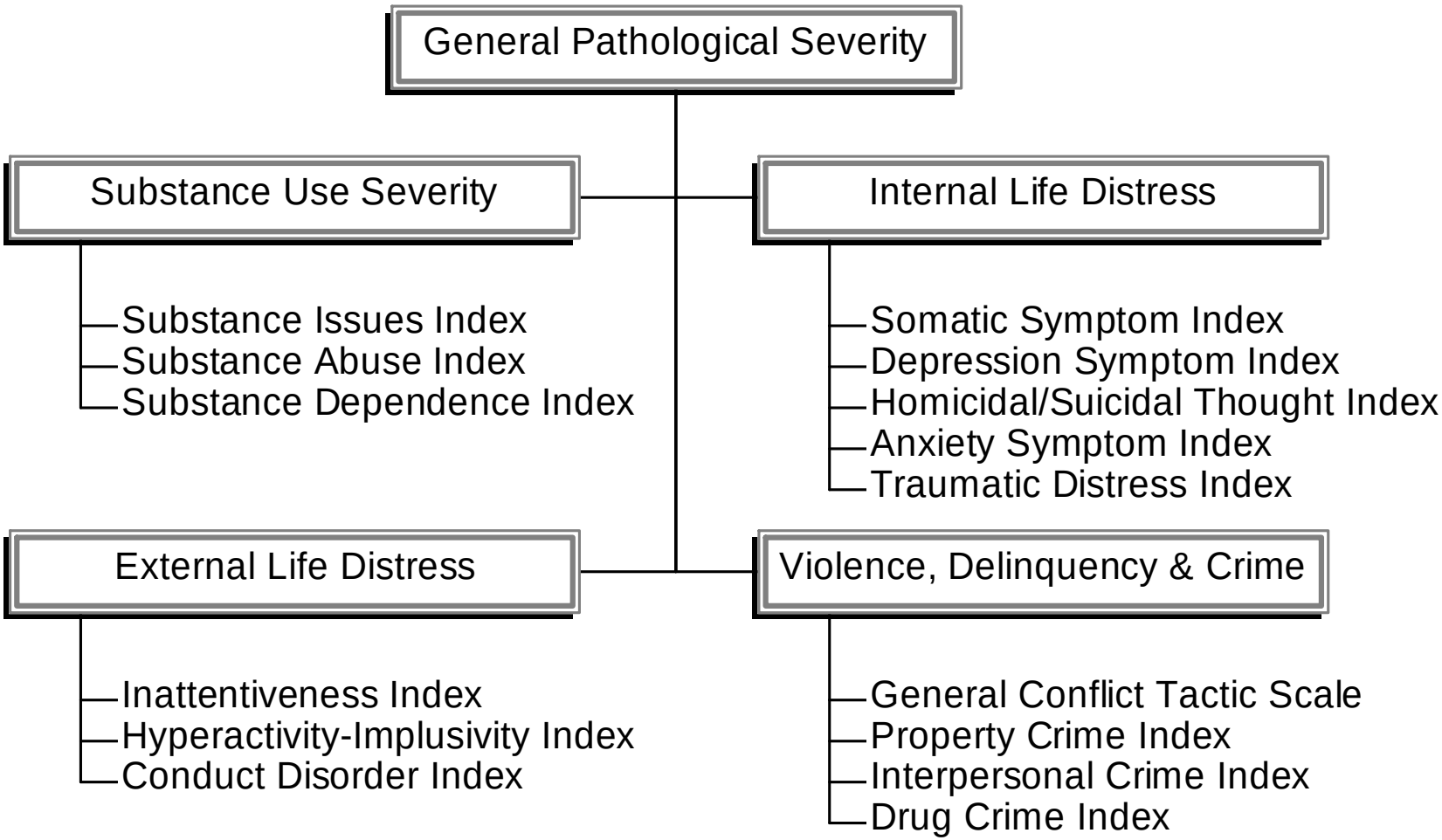
Development of comorbidity with substance abuse

- Costello (1999) n=1420 :
- Family drug problems were the strongest correlates of earlier onset of SUD
- Mean onset of abuse = 14.8
- Mean onset of dependence = 15.1
- Disruptive behavior disorders and MDD associated with earlier onset of use and higher rate of substance abuse for both genders
- Anxiety predicted later onset of smoking

Comorbidity Status by Age Category



Meta Analysis of 2968 Adolescents and Adults from 61 programs validates the following structure of the Psychopathology



Source: Dennis, Lennox, Funk & McDermeit, under review

DT – one possible pathway to co-occurring (self, family & peers)

- **“Difficult To Soothe Temperament”** – possible precursor to externalizing disorders. Predisposes a child to both a coercive parenting relationship and insecure attachments to parents.
- Temperament characteristics, particularly “sensation seeking” and “difficult to soothe”, as they are expressed in childhood, play an instrumental role in the development of alcoholism and related substance use disorders.
- “DT” toddlers more likely to experience: abuse/neglect, family problems, develop a psychiatric disorder during early childhood; LD, ADHD, ODD, CD.

Internalizing & Externalizing (%)

- **Internalizing-**anxiety, fear, shyness, low self esteem, sadness and depression (30%)
- **Externalizing** –noncompliance, aggression, attention problems, destructiveness, impulsivity, hyperactivity, and antisocial behavior. (60%)
- **Victimization** (60-80%)

Internal/External problem status
ATM clients: Residential vs. OP vs. Other

Number	Residential	OP/IOP	Other
.00 Neither	72	119	9
1.00 Internal Only	50	29	18
2.00 External Only	130	150	3
3.00 Both	476	181	16
Total	728	479	46
Percent	**Residential**	**OP/IOP**	**Other**
.00 Neither	10%	25%	20%
1.00 Internal Only	7%	**6%**	39%
2.00 External Only	18%	**31%**	7%
3.00 Both	65%	**38%**	35%
Total	100%	100%	100%

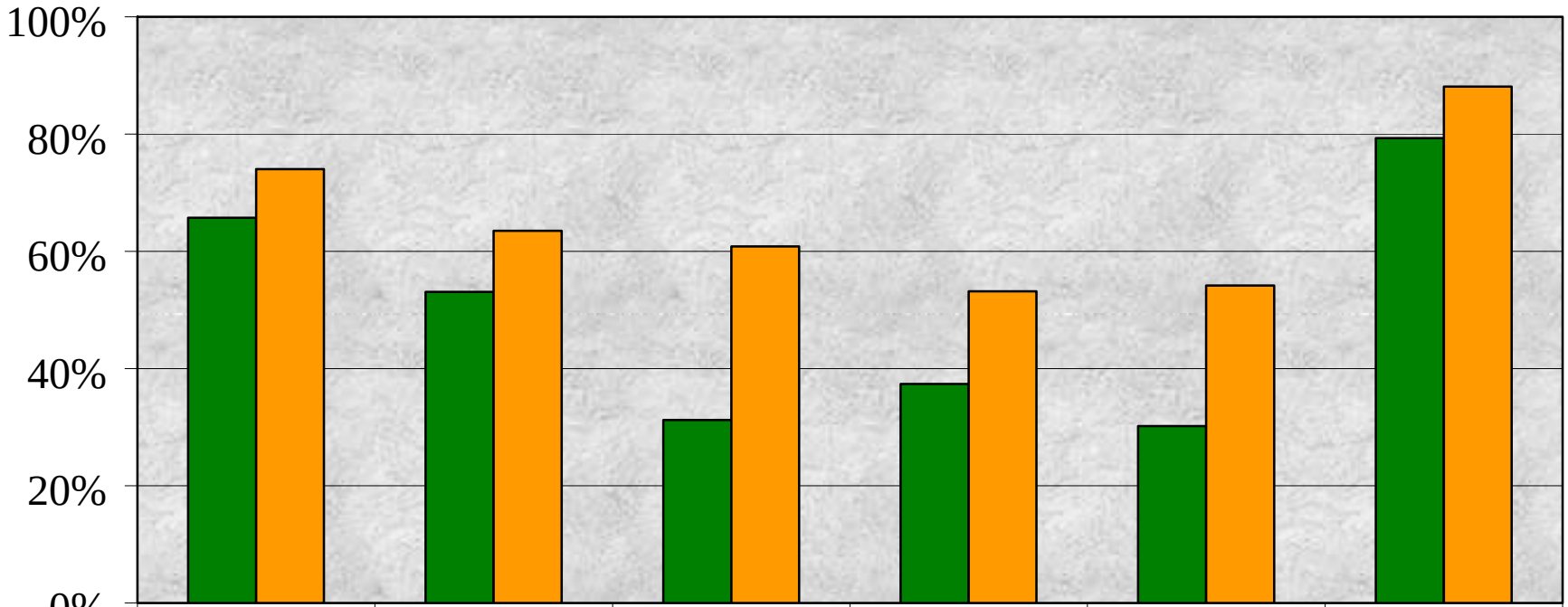
ATM Youth Diagnoses N=1607

	N	CD	ADHD	MDD	Anx	Trauma Stres	Any Co-Occuring	Life Vic	Acut Vic	Vic past 90 days
M	**1207**	66%	53%	31%	37%	30%	79%	75%	59%	27%
F	411	74%	64%	61%	53%	54%	88%	80%	71%	33%

Markers for Risk ! (Glantz, 2002)

- Certain Psychopathologies seem to be significantly associated with SUD and frequently precede SUD
- Conduct disorder and oppositional defiance disorder frequently precede SUD
- ADHD combined with CD precedes SUD but ADHD alone is still questioned for temporal order
- Depression and bipolar disorders less clear
- Anxiety depends on subtype of the disorder
  - PTSD most often precedes SUD
- Only personality disorders: borderline and antisocial

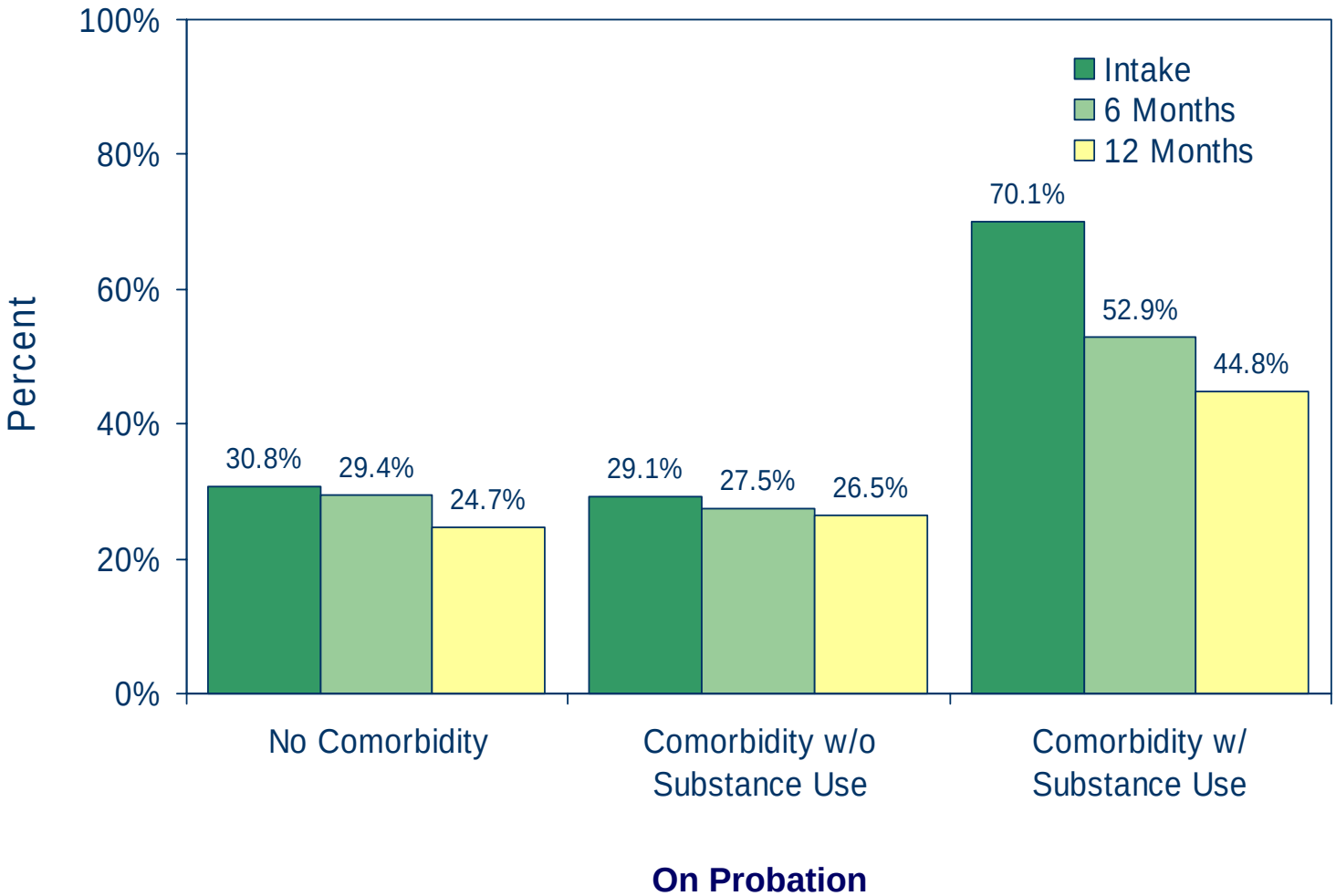
Multiple Co-occurring Problems By Gender



	Conduct Disorder	ADHD	Major Depressive Disorder	Generalized Anxiety Disorder	Traumatic Stress Disorder	Any Co-Occuring Disorder
Male	66%	53%	31%	37%	30%	79%
Female	74%	64%	61%	53%	54%	88%

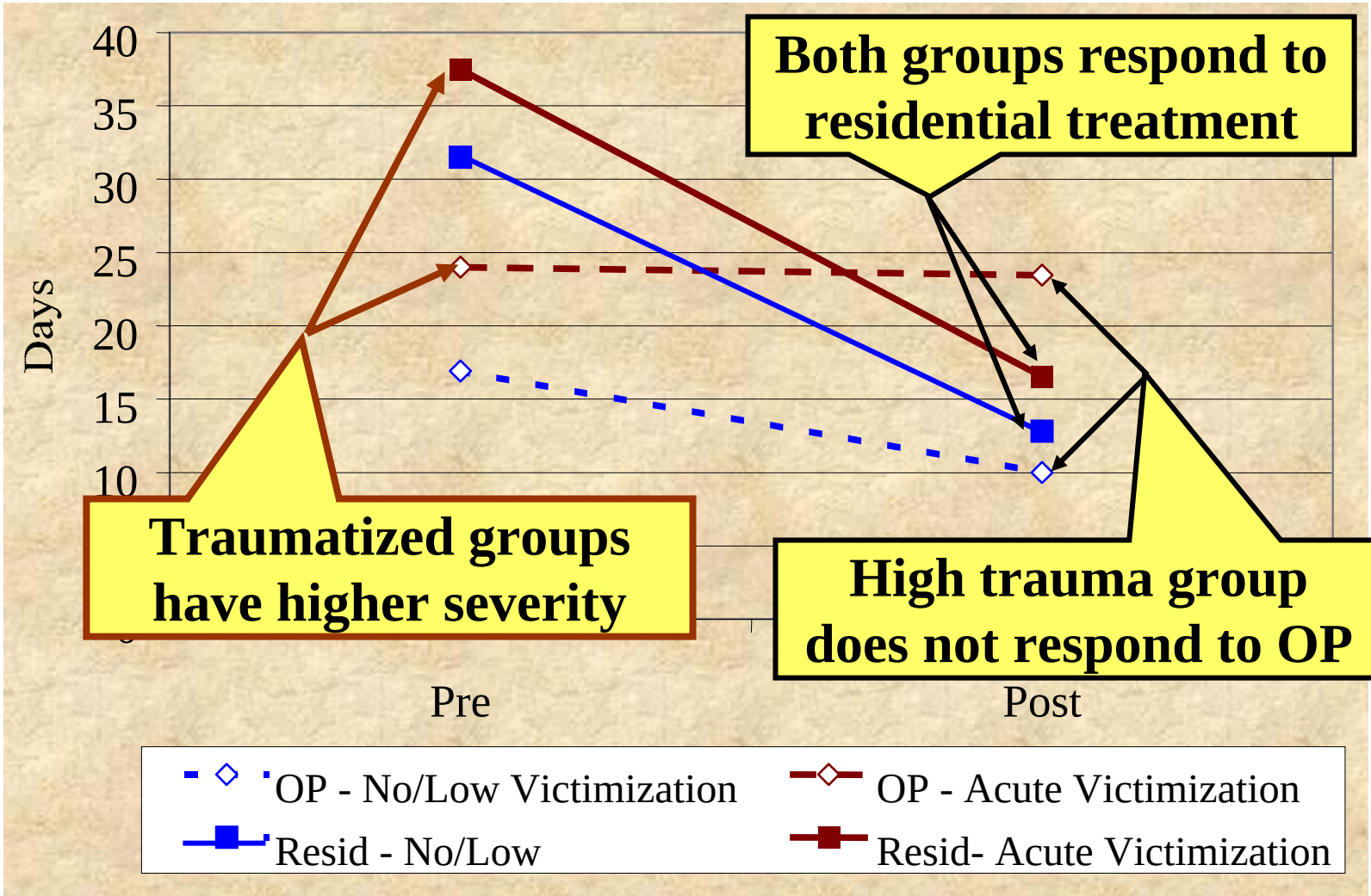
Source: CSAT's Cannabis Youth Treatment (CYT), Adolescent Treatment Model (ATM), and Persistent Effects of Treatment Study of Adolescents (PETS-A) studies

Juvenile Delinquency



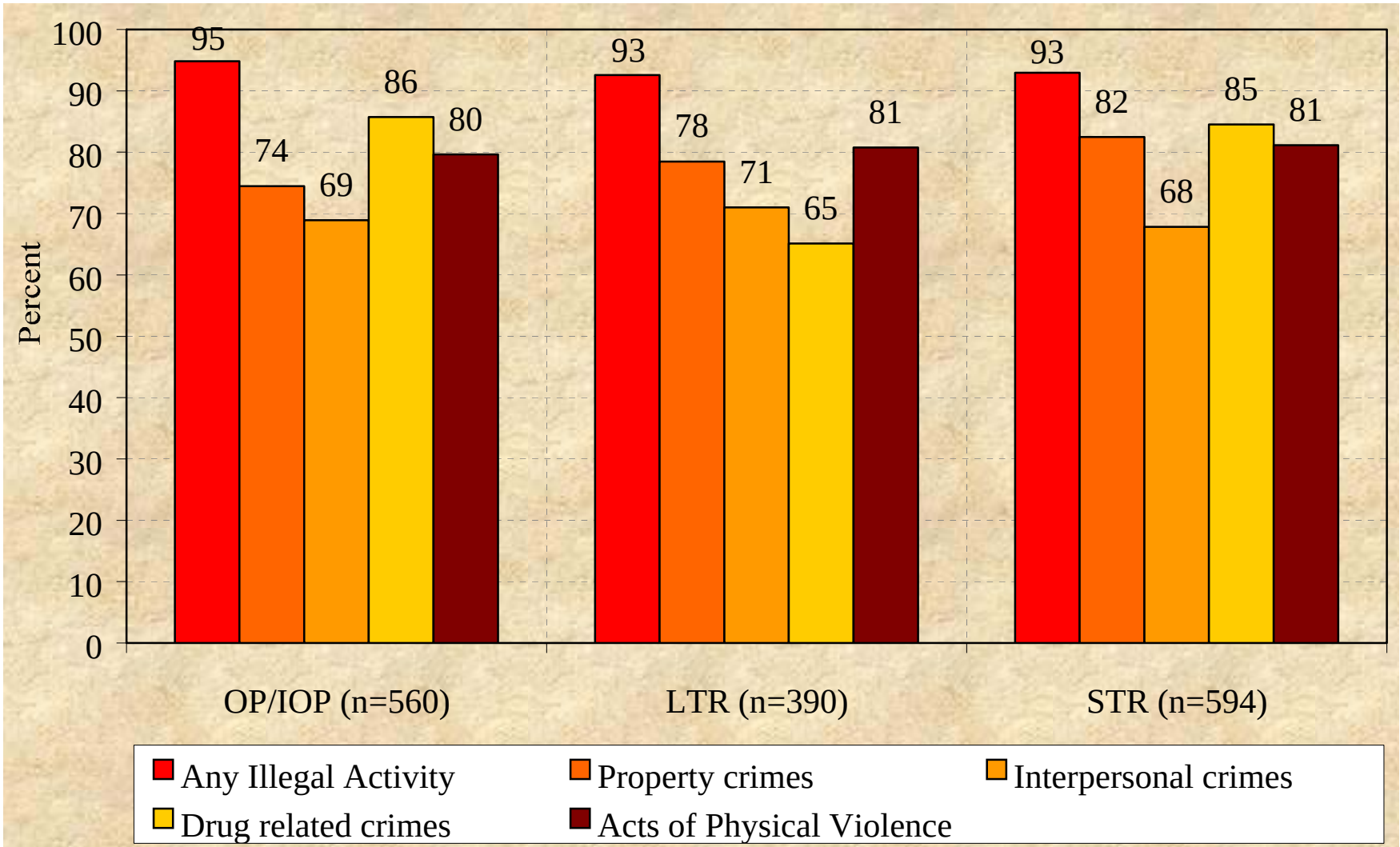
No Comorbidity Sample: *n* = 574.
Comorbidity w/o Substance Use Sample: *n* = 663.
Comorbidity w/ Substance Use Sample: *n* = 87.

Interaction of Victimization and Treatment Setting on Days of Marijuana Use



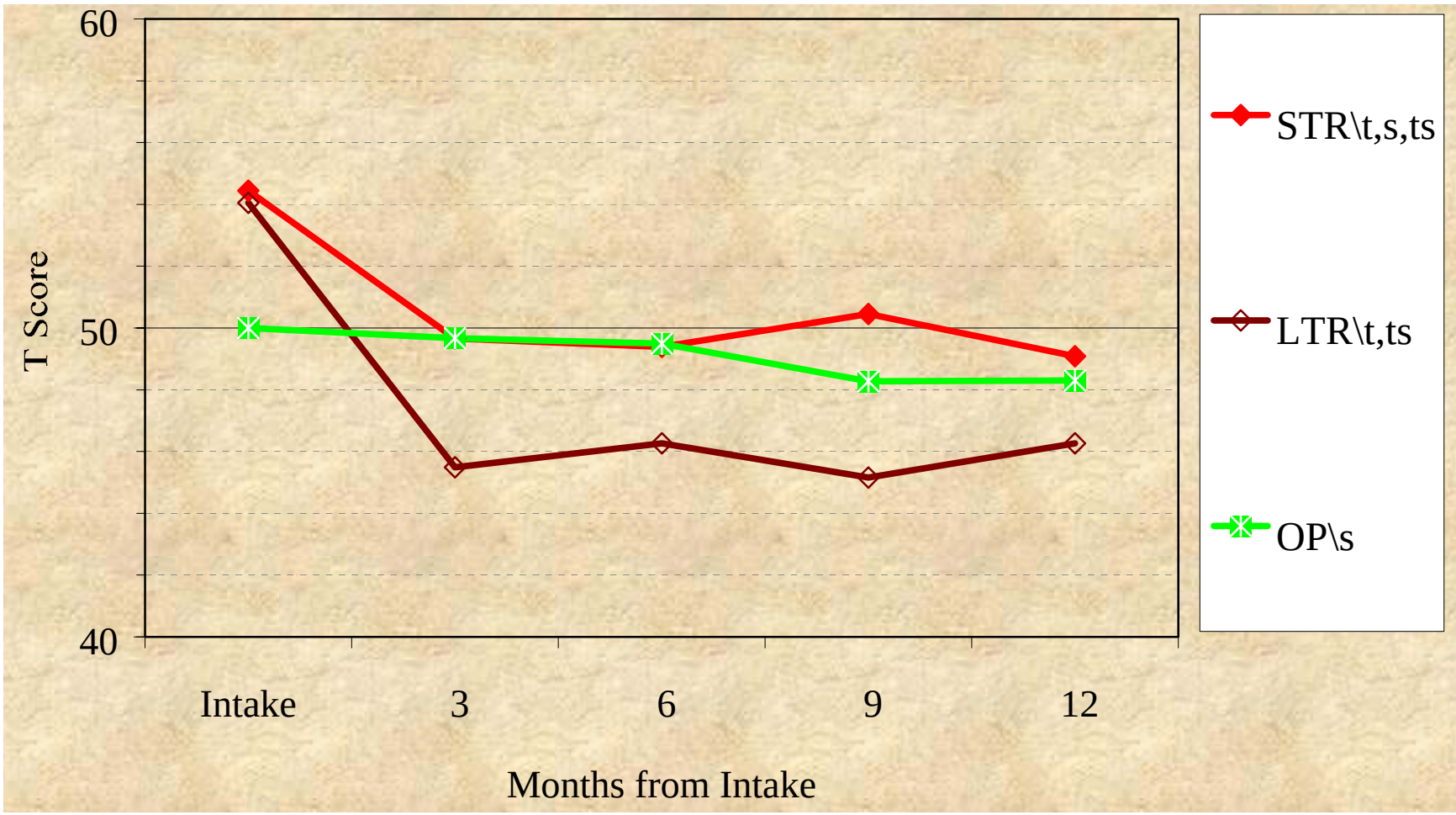
Source: Funk, et al., 2003, Adolescent Treatment Model (ATM), Assertive Continuing Care (ACC)

Illegal Activity (not just possession)



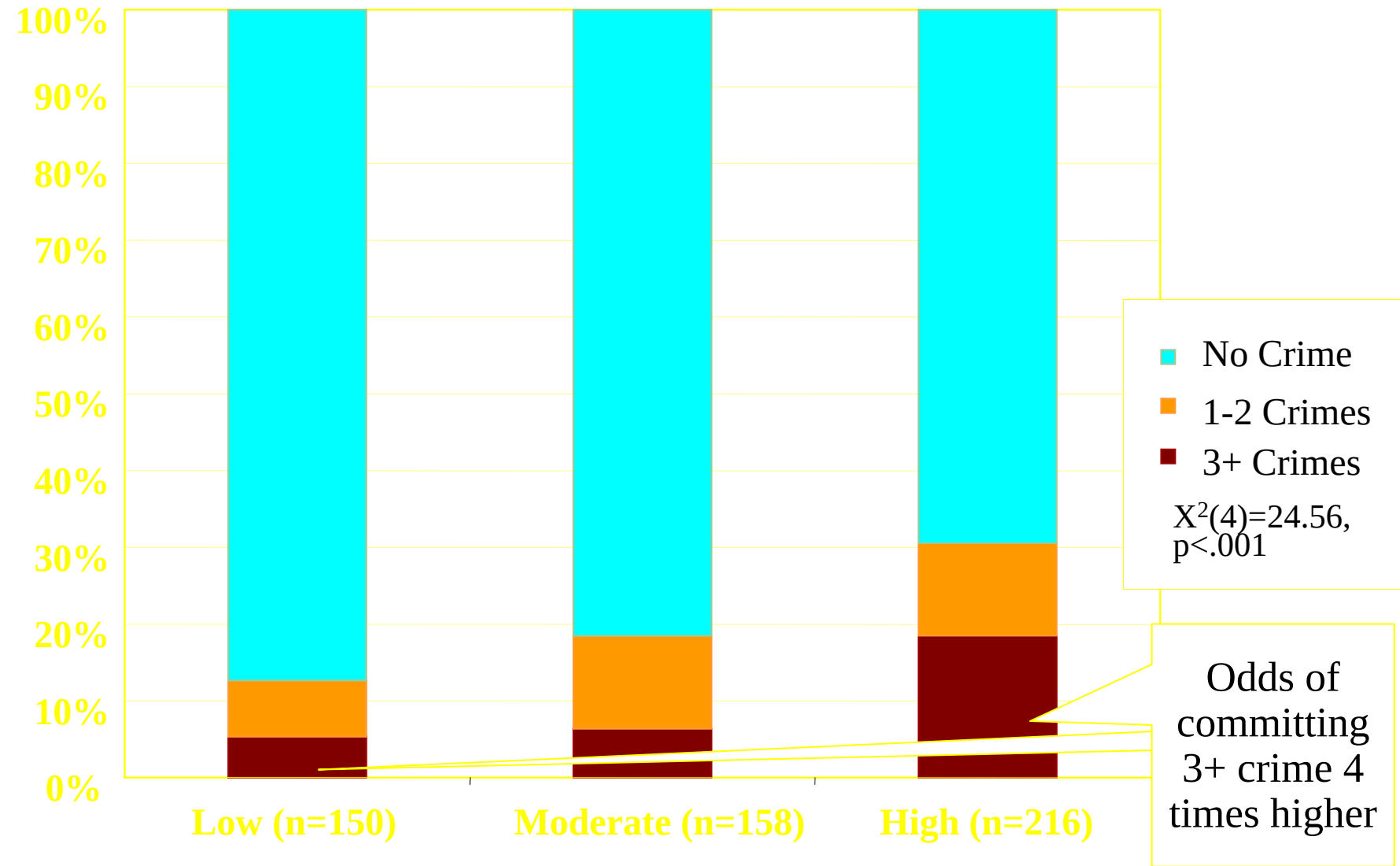
Source: Adolescent Treatment Model (ATM) data

Change in Illegal Activity Index by Level of Care\a



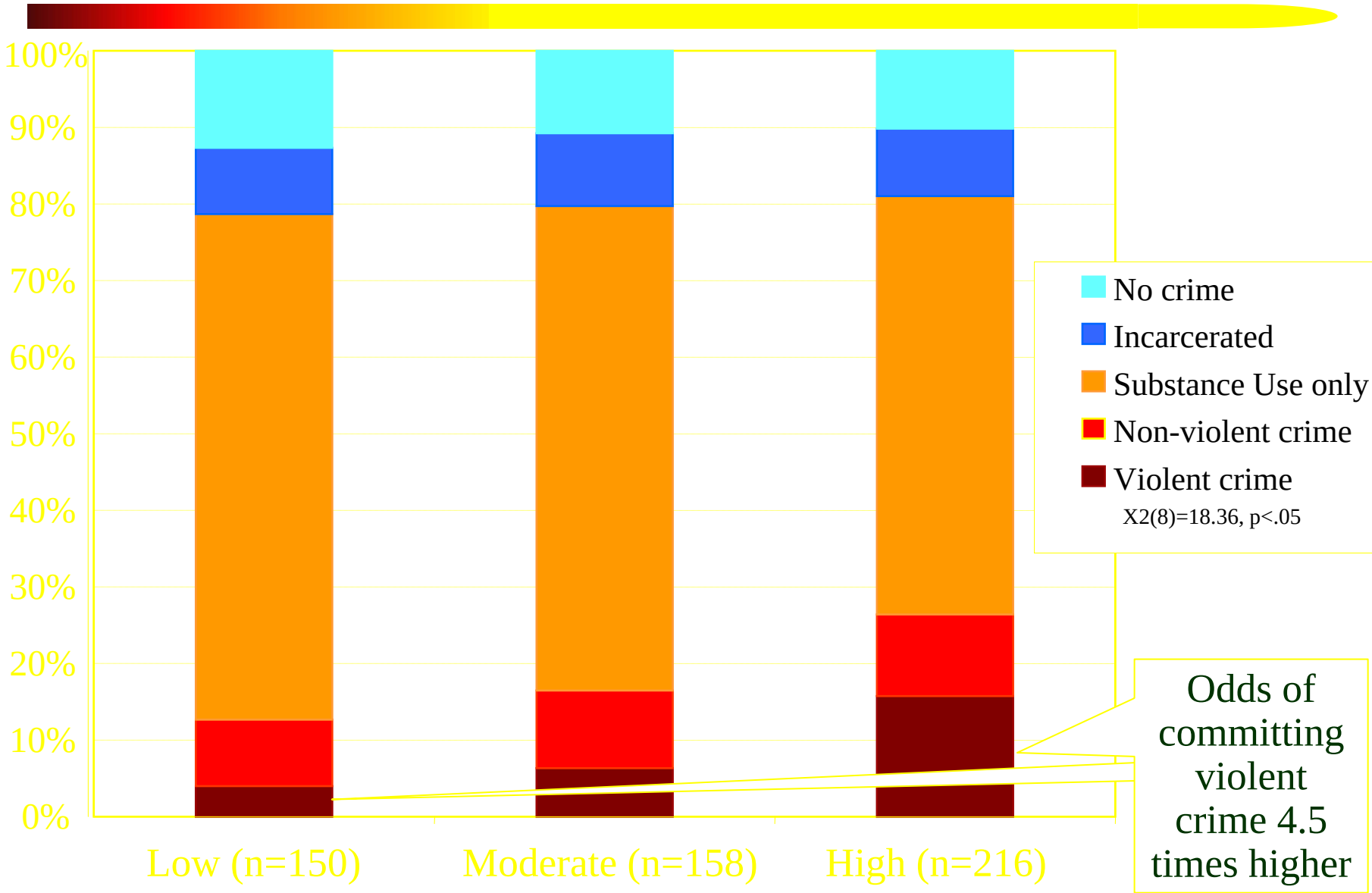
\a Source: Adolescent Treatment Model (ATM) data; Level of cares coded as Long Term Residential (LTR, n=390), Short Term Residential (STR, n=594), Outpatient/Intensive and Outpatient (OP/IOP, n=560);. T scores are normalized on the ATM outpatient intake mean and standard deviation. Significance (p<.05) marked as \t for time effect, \s for site effect, and \ts for time x site effect.

CVS can predict Criminal Activity 30 Months Later



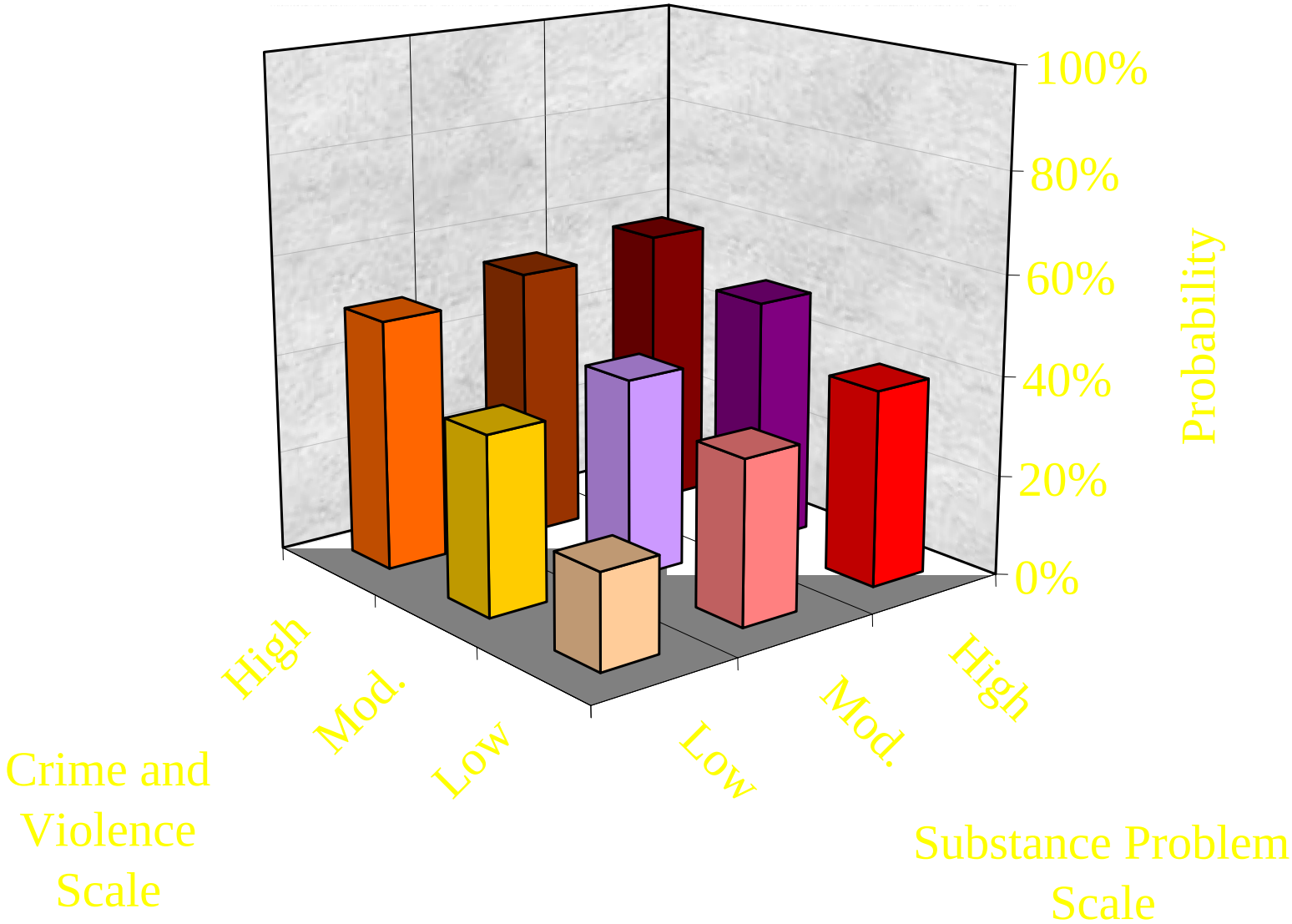
Source: White et al (2003), PETSA

CVS Predict Type of Crime 30 Months Later



Source: White et al (2003), PETSA

SPS and CVS Together Predict Recidivism in 12 Months



Source: Dennis et al 2004, ERI

More risk = More care

- Prognosis is worse for “dd” youth for many reasons: less motivation, increased academic, family, and behavior problems, limited coping and social skills.
- Lag in important adolescent development tasks – individuation, moral development and conceptualization of future family, vocational and educational goals.

Supports for addressing MH &SA

- Unrecognized mental health disorders reduce engagement, retention and completion
- Untreated co-morbid disorders persist after recovery: ADHD, Mood Disorders
- After recovery form SUD, depression in youth is much more likely to persist compared to adults.
- Recent controlled trials indicate that tx of comorbid disorders alone is not likely to significantly reduce substance use or induce abstinence in dd adolescents.

Substance Use is a Chronic Condition

- Relapse is common, particularly in the first 90 days
- From first use to a year of sobriety averages 27 years
- From first treatment to a year of sobriety averages 8 years with 3 to 4 admissions to care
- The majority of adults and adolescents in higher levels of care have been in treatment before
- Even in adolescent outpatient, over 1 in 4 have been in treatment before
- Yet the treatment and finance system has traditionally be set up with an “acute care” model.
- Need for more assertive models of public health and chronic care

Source: Dennis et al in press

Lessons from Behavioral Studies

- Improvements generally came during active treatment and were sustained for 12 or more months
- Family therapies were associated with less initial change but more change post active treatment (and the same in long-term effects)
- Effectiveness was associated with therapies that:
  - were manual-guided and had developmentally appropriate materials
  - involved more quality assurance and clinical supervision
  - achieved therapeutic alliance and early positive outcomes
  - successfully engaged adolescents in aftercare, support groups, positive peer reference groups, more supportive recovery environments

Lessons from Behavioral Studies

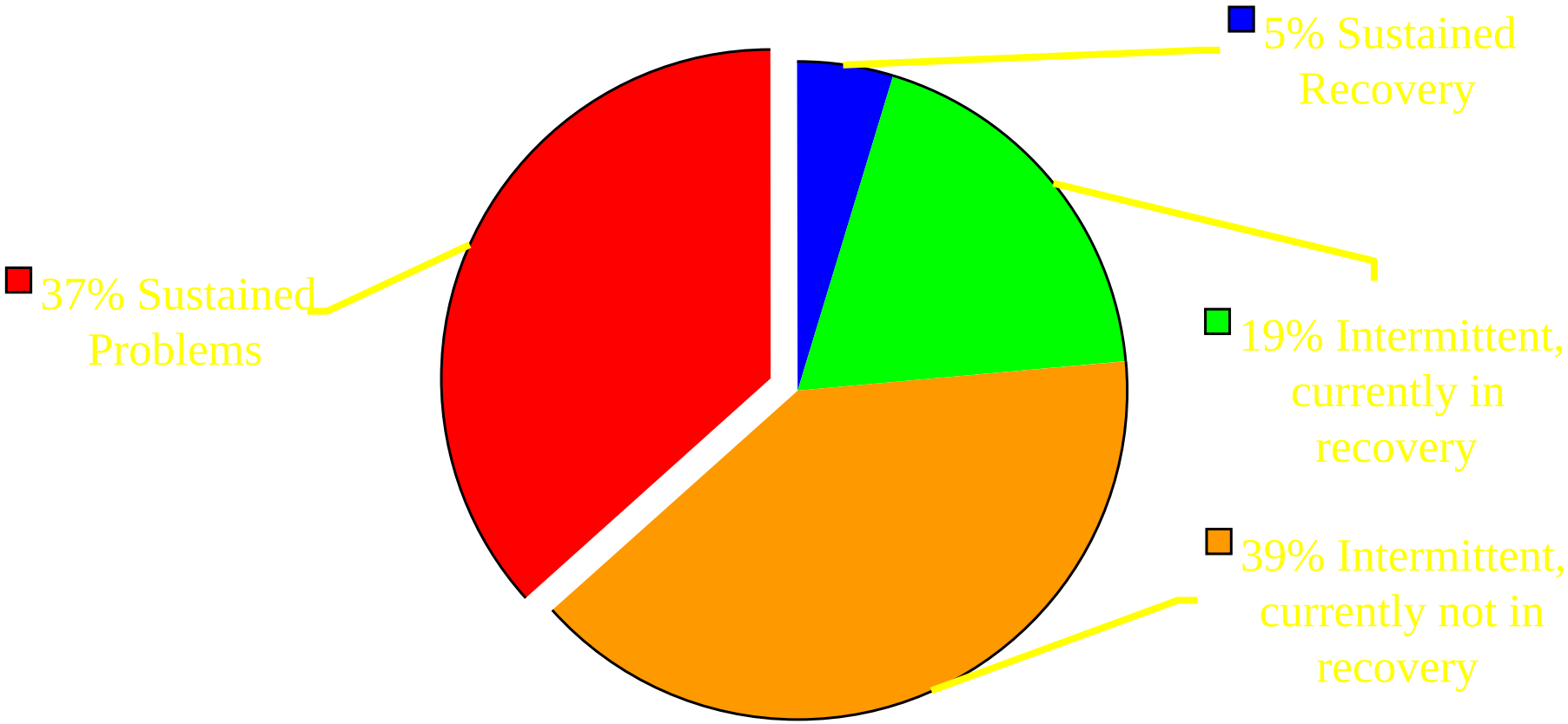
- The effectiveness of group therapy was dependent on the composition of the group
- The effectiveness of therapy was dependent on changes in the recovery environment and social risk
- Effectiveness was not consistently associated with the amount of therapy over 6-12 weeks or type of therapy
- As other therapies have improved, there is no longer the clear advantage of family therapy found in early literature reviews
- Differences between conditions change over time, with many people fluctuating between use and recovery

Substance Use is a Chronic Condition

- Relapse is common, particularly in the first 90 days
- From first use to a year of sobriety averages 27 years
- From first treatment to a year of sobriety averages 8 years with 3 to 4 admissions to care
- The majority of adults and adolescents in higher levels of care have been in treatment before
- Even in adolescent outpatient, over 1 in 4 have been in treatment before
- Yet the treatment and finance system has traditionally be set up with an “acute care” model.
- Need for more assertive models of public health and chronic care

Source: Dennis et al in press

Cumulative Recovery Pattern at 30 months: (The Majority Vacillate in and out of Recovery)



Source: Dennis et al, in press; forthcoming, CYT, PETSA